AMENDMENTS TO THE CLAIMS

Please add claims 161-270 as indicated below. This listing of claims will replace all prior versions, and listings, of claims in the application:

5 <u>Listing of Claims:</u>

1-37. (canceled)

38. (previously presented) The compound according to claims 62 or 68, selected from the group consisting of:

10

223b

$$\begin{array}{c}
 & O \\
 & N \\
 & N \\
 & O \\
 & N \\
 & O \\
 & M \\
 & O \\
 &$$

823e

826e OH CI

5

39. (previously presented) The compound according to claim 62, selected from the group consisting of:

623 ON NO HOH H O H O

5

634
$$H_3C$$
 CH ; and

40. (previously presented) The compound according to claims 62 or 68, selected from the group consisting of:

217c

217e

257 ON NO HOH

280 OH N-N H

281 OH BF4 CI

	Ĵ	
286		;
	H ₃ CO N OH O	

408 , OH OH OH OH

409 N O N OH OH O ;

413 $\begin{array}{c} O \\ O \\ N \\ O \\ O \\ H \end{array} \begin{array}{c} O \\ O \\ O \\ H \end{array} \begin{array}{c} O \\ O \\ O \\ H \end{array} \begin{array}{c} O \\ O \\ O \\ O \end{array}$

417 ON NO OH OH OH OH

418 $\begin{array}{c} O \\ N \\ N \\ N \\ O \end{array} \begin{array}{c} O \\ N \\ N \\ O \end{array} \begin{array}{c} O \\ N \\ N \\ O \end{array}$

424 NN NN OH H

425 HO N CH

434 H OH H OH H

436 , NO HOH

438 ON NO HOH

440 , NA OH H

441 , NATION TO THE STATE OF TH

442 OH HOH

444 CI ON NOH H

454 PN OH H

455 PHOON HOH ;

463 P O H O H O H

CI NO OH H

465 H O H OH ;

467 ON NO OH OH OH

469 H₃C O H O H O H

476 HO N OH H

477 HONN HONN ;

481 CI H₂N H OH H

481s ;

482 CI H₂N CI

482s

483 PH ON NO HOH ;

H₃C H H O H O H O H

H₃C N H O N O CH

486 PHOHH

487 H₃C O H O H O H O H O

488 H₃C N H O H O H O H O H

882

884 OH OH OCI

H₃CO H O CH₃

•

1009 N N OH H

1017
$$CH_3O \longrightarrow H OH H$$

Page 50 of 201

1023

$$H_3C$$
 H_3C
 H_3C

Page 54 of 201

1046

1047

O O H OH H OH H

1049 OH HOH H

	Ĵ	
1063	o N	;
	N N N N OH	
	F H OON NAME	
	н "	

1094

1095 , N N OH H

1096 , N N N N N OH H

1097 ;

41. (canceled)

42. (previously presented) A pharmaceutical composition comprising a compound according to any one

of claims 38-40, 57, 62, 66, 68, 79-83, 88-93, 95, 96, 98, 99, 100, 102, 104, 112, 114, 118-131, 133-135 and a pharmaceutically acceptable carrier.

43-54. (canceled)

55. (previously presented) A method for 5 treating or preventing a disease selected from the group consisting of an IL-1 mediated disease, an apoptosis mediated disease, an inflammatory disease, an autoimmune disease, a destructive bone disorder, a proliferative disorder, an infectious disease, a 10 degenerative disease, a necrotic disease, osteoarthritis, pancreatitis, asthma, adult respiratory distress syndrome, glomeralonephritis, rheumatoid arthritis, systemic lupus erythematosus, scleroderma, chronic thyroiditis, Grave's disease, autoimmune 15 gastritis, insulin-dependent diabetes mellitus (Type I), autoimmune hemolytic anemia, autoimmune neutropenia, thrombocytopenia, chronic active hepatitis, myasthenia gravis, inflammatory bowel disease, Crohn's disease, psoriasis, graft vs host 20 disease, osteoporosis, multiple myeloma-related bone disorder, acute myelogenous leukemia, chronic myelogenous leukemia, metastatic melanoma, Kaposi's

sarcoma, multiple myeloma, sepsis, septic shock,
Shigellosis, Alzheimer's disease, Parkinson's disease,
cerebral ischemia, myocardial ischemia, spinal muscular
atrophy, multiple sclerosis, AIDS-related encephalitis,
HIV-related encephalitis, aging, alopecia, and
neurological damage due to stroke in a patient
comprising the step of administering to said patient a
pharmaceutical composition according to claim 42.

- 56. (previously presented) The method

 according to claim 55, wherein the disease is selected
 from the group consisting of osteoarthritis, acute
 pancreatitis, rheumatoid arthritis, inflammatory bowel
 disease, Crohn's disease, psoriasis, and Alzeheimer's
 disease.
- 57. (previously presented) A compound represented by the formula:

wherein:

5

 ${\bf R}_{\bf 1}$ is selected from the group consisting of the following formulae:

(e10)
$$R_{21} \xrightarrow{N} X_{5} \xrightarrow{N} X_{5}$$
;

(e11)
$$R_{5}-N \qquad \qquad ;$$

$$\begin{array}{c} R_8 \\ R_5 - N \\ H \end{array} \begin{array}{c} O \\ R_6 \end{array} \hspace{0.5cm} ;$$

$$(y2) \qquad \qquad X_7 \qquad X$$

$$(z) \begin{array}{c} X_7 \\ X_7 \\ N \\ N \\ N \end{array} \qquad \text{; and}$$

ring C is chosen from the group consisting of benzo, pyrido, thieno, pyrrolo, furano, thiazolo, isothiazolo, oxazolo, isoxazolo, pyrimido, imidazolo, cyclopentyl, and cyclohexyl;

 R_2 is:

m is 1 or 2;

each $\ensuremath{\text{R}}_5$ is independently selected from the group consisting of:

$$-C(0) -R_{10},$$

$$-C(0) O -R_{9},$$

$$-C(0) -N(R_{10})(R_{10})$$

$$-S(0)_{2} -R_{9},$$

$$-S(0)_{2} -NH -R_{10},$$

$$-C(0) -CH_{2} -O -R_{9},$$

```
Application No. 10/058,522
       Supp. Amdt. dated March 11, 2004
                    -C(0)C(0)-R_{10}
                    -R<sub>9</sub>,
                    -H,
                    -C(0)C(0)-OR_{10}, and
                    -C(0)C(0)-N(R_9)(R_{10});
 5
             X_5 is CH or N;
             Y_2 is H_2 or O;
             X_7 is -N(R_8) - or -O-;
10
              R_6 is selected from the group consisting of -H and
       -CH_3;
              R_8 is selected from the group consisting of:
                    -C(0)-R_{10},
15
                    -C(O)O-R9,
                    -C(0)-N(H)-R_{10}
                    -S(0)_2-R_9,
                    -S(0)_2-NH-R_{10}
                    -C(0)-CH_2-OR_{10},
20
                    -C(0)C(0)-R_{10};
                    -C(0) - CH_2N(R_{10})(R_{10}),
                    -C(0) - CH_2C(0) - O - R_9
                    -C(0) - CH_2C(0) - R_9,
25
                    -H, and
                    -C(0)-C(0)-OR_{10};
```

each R_9 is independently selected from the group consisting of $-Ar_3$ and a $-C_{1-6}$ straight or branched alkyl group optionally substituted with $-Ar_3$, wherein the $-C_{1-6}$ alkyl group is optionally unsaturated;

30

5

10

15

20

25

each R_{10} is independently selected from the group consisting of -H, -Ar₃, a -C₃₋₆ cycloalkyl group, and a -C₁₋₆ straight or branched alkyl group optionally substituted with -Ar₃, wherein the -C₁₋₆ alkyl group is optionally unsaturated;

 $\rm R_{13}$ is selected from the group consisting of H, Ar₃, and a -C₁₋₆ straight or branched alkyl group optionally substituted with -Ar₃, -CONH₂, -OR₅, -OH, -OR₉, or -CO₂H;

each R_{51} is independently selected from the group consisting of R_9 , $-C(O)-R_9$, $-C(O)-N(H)-R_9$, or each R_{51} taken together forms a saturated 4-8 member carbocyclic ring or heterocyclic ring containing -O-, -S-, or -NH-;

each R_{21} is independently selected from the group consisting of -H or a $-C_{1-6}$ straight or branched alkyl group;

each Ar_3 is a cyclic group independently selected from the set consisting of an aryl group which contains 6, 10, 12, or 14 carbon atoms and between 1 and 3 rings and an aromatic heterocycle group containing between 5 and 15 ring atoms and between 1 and 3 rings, said heterocyclic group containing at least one heteroatom group selected from -O-, -S-, -SO-, SO_2 , =N-, and -NH-, said heterocycle group optionally containing one or more double bonds, said heterocycle group optionally comprising one or more aromatic rings, and said cyclic group optionally being singly or multiply substituted by $-Q_1$;

each Q_1 is independently selected from the group consisting of $-NH_2$, $-CO_2H$, -Cl, -F, -Br, -I, $-NO_2$, -CN, =O, -OH, -perfluoro C_{1-3} alkyl, R_5 , $-OR_5$, $-NHR_5$, $-OR_9$, $-N(R_9)$ (R_{10}) , $-R_9$, -C(O) $-R_{10}$, and

5

CH₂,

provided that when $-\mathrm{Ar}_3$ is substituted with a Q_1 group which comprises one or more additional $-\mathrm{Ar}_3$ groups, said additional $-\mathrm{Ar}_3$ groups are not substituted with another $-\mathrm{Ar}_3$.

58-61. (canceled)

15

62. (previously presented) A compound represented by the formula:

(IV)
$$R_1 - N - R_3$$

wherein:

m is 1 or 2;

20

 $\ensuremath{\mathtt{R}}_1$ is selected from the group consisting of the following formulae:

(e10-A)

(e11)
$$\begin{array}{c} Y_2 \\ N \\ N \\ N \end{array} ;$$

(e12)
$$R_{21} \longrightarrow N$$

5

$$(w2) \qquad R_{5} - N \qquad R_{6} \qquad ;$$

$$(y1) \qquad \begin{array}{c} R_8 \\ N \\ N \\ N \\ N \end{array} ;$$

$$(y2) \qquad \qquad X_7 \qquad \qquad ; \text{ and} \qquad \qquad$$

10 $\begin{array}{c} Y_2 \\ X_7 \\ X_7 \\ X_8 \\ Y_9 \\ Y$

ring C is chosen from the group consisting of benzo, pyrido, thieno, pyrrolo, furano, thiazolo,

Supp. Amdt. dated March 11, 2004 isothiazolo, oxazolo, isoxazolo, pyrimido, imidazolo, cyclopentyl, and cyclohexyl; R₃ is selected from the group consisting of: -CN, -C(O)-H5 $-C(0)-CH_2-T_1-R_{11}$, $-C(0)-CH_2-F$, $-C=N-O-R_9$, and -CO-Ar₂; each R_5 is independently selected from the group 10 consisting of: $-C(0)-R_{10}$, -C(O)O-R9, $-C(0)-N(R_{10})(R_{10})$ $-S(0)_2-R_9$, 15 $-S(0)_2-NH-R_{10}$ $-C(0) - CH_2 - O - R_9$, $-C(0)C(0)-R_{10}$ -R₉. 20 -H, $-C(0)C(0)-OR_{10}$, and $-C(0)C(0)-N(R_9)(R_{10});$ Y_2 is H_2 or O; X_7 is $-N(R_8)$ - or -O-; 25 each T_1 is independently selected from the group

Application No. 10/058,522

 $\ensuremath{\text{R}_6}$ is selected from the group consisting of -H and

consisting of -O-, -S-, -S(0)-, and -S(0)₂-;

```
Application No. 10/058,522
        Supp. Amdt. dated March 11, 2004
        -CH_3;
               R<sub>8</sub> is selected from the group consisting of:
                     -C(0)-R_{10},
                     -C(O)O-R9,
5
                     -C(0)-NH-R_{10},
                     -S(0)_2-R_9,
                     -S(0)_2-NH-R_{10}
                     -C(0) - CH_2 - OR_{10}
                     -C(0)C(0)-R_{10}
                     -C(0) - CH_2 - N(R_{10})(R_{10}),
10
                     -C(O) - CH_2C(O) - O - R_9,
                     -C(O) - CH_2C(O) - R_{9}
                     -H, and
                     -C(0)-C(0)-OR_{10};
```

each R_9 is independently selected from the group consisting of $-Ar_3$ and a $-C_{1-6}$ straight or branched alkyl group optionally substituted with $-Ar_3$, wherein the $-C_{1-6}$ alkyl group is optionally unsaturated;

each R_{10} is independently selected from the group consisting of -H, -Ar₃, a -C₃₋₆ cycloalkyl group, and a -C₁₋₆ straight or branched alkyl group optionally substituted with -Ar₃, wherein the -C₁₋₆ alkyl group is optionally unsaturated;

each R_{11} is independently selected from the group consisting of:

```
-Ar_4,

-(CH_2)_{1-3}-Ar_4,

-H, and

-C(O)-Ar_4;
```

5

10

20

25

 R_{15} is selected from the group consisting of -OH, -OAr₃, -N(H)-OH, and -OC₁₋₆, wherein C₁₋₆ is a straight or branched alkyl group optionally substituted with -Ar₃, -CONH₂, -OR₅, -OH, -OR₉, or -CO₂H;

each R_{21} is independently selected from the group consisting of -H or a $-C_{1-6}$ straight or branched alkyl group;

Ar₂ is independently selected from the following group, in which any ring may optionally be singly or multiply substituted by $-Q_1$ or phenyl, optionally substituted by Q_1 :

(hh)
$$\stackrel{\mathsf{Y}}{\longrightarrow}$$
 , and

$$\stackrel{\text{(ii)}}{\longrightarrow}$$

wherein each Y is independently selected from the group consisting of O and S;

each Ar_3 is a cyclic group independently selected from the set consisting of an aryl group which contains 6, 10, 12, or 14 carbon atoms and between 1 and 3 rings and an aromatic heterocycle group containing between 5 and 15 ring atoms and between 1 and 3 rings, said heterocyclic group containing at least one heteroatom group selected from -O-, -S-, -SO-, SO_2 , =N-, and -NH-, -N(R_5)-, and -N(R_9)- said heterocycle group optionally containing one or more double bonds, said heterocycle group optionally comprising one or more aromatic rings,

5

10

25

and said cyclic group optionally being singly or multiply substituted by $-Q_1$;

each Ar_4 is a cyclic group independently selected from the set consisting of an aryl group which contains 6, 10, 12, or 14 carbon atoms and between 1 and 3 rings, and a heterocycle group containing between 5 and 15 ring atoms and between 1 and 3 rings, said heterocyclic group containing at least one heteroatom group selected from -O-, -S-, -SO-, SO_2 , =N-, -NH-, $-N(R_5)-$, and $-N(R_9)-$ said heterocycle group optionally containing one or more double bonds, said heterocycle group optionally comprising one or more aromatic rings, and said cyclic group optionally being singly or multiply substituted by $-Q_1$;

each Q_1 is independently selected from the group consisting of $-NH_2$, $-CO_2H$, -Cl, -F, -Br, -I, $-NO_2$, -CN, =O, -OH, -perfluoro C_{1-3} alkyl, R_5 , $-OR_5$, $-NHR_5$, $-OR_9$, $-N(R_9)(R_{10})$, $-R_9$, $-C(O)-R_{10}$, and O CH_2 ;

provided that when $-\mathrm{Ar}_3$ is substituted with a Q_1 group which comprises one or more additional $-\mathrm{Ar}_3$ groups, said additional $-\mathrm{Ar}_3$ groups are not substituted with another $-\mathrm{Ar}_3$.

63-65. (canceled)

66. (previously presented) A compound represented by the formula:

wherein:

5

10

m is 1 or 2;

 R_1 is: $R_{21} \longrightarrow N$ $R_{5} \longrightarrow N$ $R_{5} \longrightarrow N$

 R_3 is selected from the group consisting of:

È

-CN,

-C(O)-H,

 $-C(0) - CH_2 - T_1 - R_{11}$

 $-C(0)-CH_2-F$,

 $-C=N-O-R_9$, and

-CO-Ar₂;

each R_5 is $-C(0)C(0)-OR_{10}$;

 Y_2 is H_2 or O;

each T_1 is independently selected from the group consisting of -O-, -S-, -S(0)-, and -S(0)₂-;

each R_9 is independently selected from the group consisting of $-Ar_3$ and a $-C_{1-6}$ straight or branched alkyl group optionally substituted with $-Ar_3$, wherein the $-C_{1-6}$ alkyl group is optionally unsaturated;

each R_{10} is independently selected from the group consisting of -H, -Ar₃, a -C₃₋₆ cycloalkyl group, and a -C₁₋₆ straight or branched alkyl group optionally substituted with -Ar₃, wherein the -C₁₋₆ alkyl group is optionally unsaturated;

each R_{11} is independently selected from the group consisting of:

 $-Ar_4$,

5

10

15

20

 $-(CH_2)_{1-3}-Ar_4$

-H, and

 $-C(0)-Ar_4;$

 R_{15} is selected from the group consisting of -OH, -OAr₃, -N(H)-OH, and -OC₁₋₆, wherein C₁₋₆ is a straight or branched alkyl group optionally substituted with -Ar₃, -CONH₂, -OR₅, -OH, -OR₉, or -CO₂H;

each R_{21} is independently selected from the group consisting of -H or a $-C_{1-6}$ straight or branched alkyl group;

Ar₂ is independently selected from the following group, in which any ring may optionally be singly or multiply substituted by $-Q_1$ or phenyl, optionally substituted by Q_1 :

$$(hh)$$
 , and

5

10

15

20

25

wherein each Y is independently selected from the group consisting of O and S;

each Ar_3 is a cyclic group independently selected from the set consisting of an aryl group which contains 6, 10, 12, or 14 carbon atoms and between 1 and 3 rings and an aromatic heterocycle group containing between 5 and 15 ring atoms and between 1 and 3 rings, said heterocyclic group containing at least one heteroatom group selected from -O-, -S-, -SO-, SO_2 , =N-, and -NH-, -N(R_5)-, and -N(R_9)- said heterocycle group optionally containing one or more double bonds, said heterocycle group optionally comprising one or more aromatic rings, and said cyclic group optionally being singly or multiply substituted by -Q1;

each Ar_4 is a cyclic group independently selected from the set consisting of an aryl group which contains 6, 10, 12, or 14 carbon atoms and between 1 and 3 rings, and a heterocycle group containing between 5 and 15 ring atoms and between 1 and 3 rings, said heterocyclic group containing at least one heteroatom group selected from -O-, -S-, -SO-, SO_2 , =N-, -NH-, $-N(R_5)-$, and $-N(R_9)-$ said heterocycle group optionally containing one or more double bonds, said heterocycle group optionally comprising one or more aromatic rings, and said cyclic group optionally being singly or multiply substituted by $-Q_1$;

each Q_1 is independently selected from the group

consisting of $-NH_2$, $-CO_2H$, -Cl, -F, -Br, -I, $-NO_2$, -CN, =O, -OH, -perfluoro C_{1-3} alkyl, R_5 , $-OR_5$, $-NHR_5$, $-OR_9$, $-N(R_9)$ (R_{10}) , $-R_9$, $-C(O)-R_{10}$, and O

5

10

CH₂;

provided that when $-\mathrm{Ar}_3$ is substituted with a Q_1 group which comprises one or more additional $-\mathrm{Ar}_3$ groups, said additional $-\mathrm{Ar}_3$ groups are not substituted with another $-\mathrm{Ar}_3$.

67. (canceled)

68. (previously presented) A compound represented by the formula:

15

$$()$$
 R_1-N
 R_3
 H

wherein:

m is 1 or 2;

 R_1 is:

20

(e10-B)
$$R_{5}-N$$

$$R_{5}-N$$

$$R_{5}-N$$

 ${\sf R}_3$ is selected from the group consisting of: -CN,

Application No. 10/058,522 Supp. Amdt. dated March 11, 2004 $-C(O) - H, \\ -C(O) - CH_2 - T_1 - R_{11}, \\ -C(O) - CH_2 - F, \\ -C = N - O - R_9, \text{ and } \\ -CO - Ar_2;$ each R_5 is independent

each R_5 is independently selected from the group consisting of:

 $-C(0)-R_{10},$ $-C(0)O-R_{9},$ $-C(0)-N(R_{10})(R_{10})$ $-S(0)_{2}-R_{9},$ $-S(0)_{2}-NH-R_{10},$ $-C(0)-CH_{2}-O-R_{9},$ $-C(0)C(0)-R_{10},$ $-R_{9},$ -H, $-C(0)C(0)-OR_{10}, and$ $-C(0)C(0)-N(R_{9})(R_{10});$ $20 Y_{2} is H_{2} or O;$

25

30

each T_1 is independently selected from the group consisting of -O-, -S-, -S(0)-, and -S(0)₂-;

each R_9 is independently selected from the group consisting of $-Ar_3$ and a $-C_{1-6}$ straight or branched alkyl group optionally substituted with $-Ar_3$, wherein the $-C_{1-6}$ alkyl group is optionally unsaturated;

each R_{10} is independently selected from the group consisting of -H, -Ar₃, a -C₃₋₆ cycloalkyl group, and a -C₁₋₆ straight or branched alkyl group optionally

substituted with $-Ar_3$, wherein the $-C_{1-6}$ alkyl group is optionally unsaturated;

each R_{11} is independently selected from the group consisting of:

 $-Ar_4$

15

20

 $-(CH_2)_{1-3}-Ar_4$,

-H, and

 $-C(0)-Ar_4;$

 R_{15} is selected from the group consisting of -OH, -OAr₃, -N(H)-OH, and -OC₁₋₆, wherein C₁₋₆ is a straight or branched alkyl group optionally substituted with -Ar₃, -CONH₂, -OR₅, -OH, -OR₉, or -CO₂H;

each R_{21} is independently selected from the group consisting of -H or a $-C_{1-6}$ straight or branched alkyl group;

Ar₂ is independently selected from the following group, in which any ring may optionally be singly or multiply substituted by $-Q_1$ or phenyl, optionally substituted by Q_1 :

(hh)
$$\stackrel{\mathsf{Y}}{\longleftarrow}$$
 , and

wherein each Y is independently selected from the group consisting of O and S;

5

10

15

20

25

30

each Ar_3 is a cyclic group independently selected from the set consisting of an aryl group which contains 6, 10, 12, or 14 carbon atoms and between 1 and 3 rings and an aromatic heterocycle group containing between 5 and 15 ring atoms and between 1 and 3 rings, said heterocyclic group containing at least one heteroatom group selected from -O-, -S-, -SO-, SO_2 , =N-, and -NH-, $-N(R_5)-$, and $-N(R_9)-$ said heterocycle group optionally containing one or more double bonds, said heterocycle group optionally comprising one or more aromatic rings, and said cyclic group optionally being singly or multiply substituted by $-Q_1$;

each Ar_4 is a cyclic group independently selected from the set consisting of an aryl group which contains 6, 10, 12, or 14 carbon atoms and between 1 and 3 rings, and a heterocycle group containing between 5 and 15 ring atoms and between 1 and 3 rings, said heterocyclic group containing at least one heteroatom group selected from -O-, -S-, -SO-, SO_2 , =N-, -NH-, $-N(R_5)-$, and $-N(R_9)-$ said heterocycle group optionally containing one or more double bonds, said heterocycle group optionally comprising one or more aromatic rings, and said cyclic group optionally being singly or multiply substituted by $-Q_1$;

each Q₁ is independently selected from the group consisting of $-NH_2$, $-CO_2H$, -Cl, -F, -Br, -I, $-NO_2$, -CN, =0, -OH, -perfluoro C_{1-3} alkyl, R_5 , $-OR_5$, $-NHR_5$, $-OR_9$, $-N(R_9)(R_{10})$, $-R_9$, $-C(O)-R_{10}$, and O CH₂;

provided that when $-\mathrm{Ar}_3$ is substituted with a Q_1 group which comprises one or more additional $-\mathrm{Ar}_3$ groups, said additional $-\mathrm{Ar}_3$ groups are not substituted with another $-\mathrm{Ar}_3$;

provided that when:

m is 1; $R_{15} \text{ is -OH;}$ $R_{21} \text{ is -H; and}$

5

10

15

25

 Y_2 is O and R_3 is -C(O)-H, then R_5 cannot be: -C(O)- R_{10} , wherein R_{10} is -Ar $_3$ and the Ar $_3$ cyclic group is phenyl, unsubstituted by -Q $_1$, 4- (carboxymethoxy)phenyl, 2-fluorophenyl, 2-pyridyl, N- (4-methylpiperazino)methylphenyl, or

 $-C(0)-OR_9$, wherein R_9 is $-CH_2-Ar_3$, and the Ar_3 cyclic group is phenyl, unsubstituted by $-Q_1$; and when

 Y_2 is O, R_3 is $-C(O)-CH_2-T_1-R_{11}$, T_1 is O, and R_{11} is Ar_4 , wherein the Ar_4 cyclic group is $5-(1-(4-chlorophenyl)-3-trifluoromethyl) pyrazolyl), then <math>R_5$ cannot be:

20 -H;

 $-C(0)-R_{10}$, wherein R_{10} is $-Ar_3$ and the Ar_3 cyclic group is 4-(dimethylaminomethyl) phenyl, phenyl, 4-(carboxymethylthio) phenyl, 4-(carboxyethylthio) phenyl, 4-(carboxyethyl) phenyl, 4-(carboxyethyl) phenyl, 2-(carboxyethyl) phenyl, or

-C(O)-OR $_9$, wherein R $_9$ is isobutyl or -CH $_2$ -Ar $_3$ and the Ar $_3$ cyclic group is phenyl;

and when R_{11} is Ar_4 , wherein the Ar_4 cyclic group

5

10

15

20

is 5-(1-phenyl-3-trifluoromethyl) pyrazolyl or 5-(1-(4-chloro-2-pyridinyl)-3-trifluoromethyl) pyrazolyl, then R_5 cannot be:

 $-C(0)-OR_9$, wherein R_9 is $-CH_2-Ar_3$, and the Ar_3 cyclic group is phenyl;

and when R_{11} is Ar_4 , wherein the Ar_4 cyclic group is $5-(1-(2-pyridyl)-3-trifluoromethyl)pyrazolyl), then <math>R_5$ cannot be:

 $-C(0)-R_{10}$, wherein R_{10} is $-Ar_3$ and the Ar_3 cyclic group is 4-(dimethylaminomethyl)phenyl, or

 $-C(O)-OR_9$, wherein R_9 is $-CH_2-Ar_3$, and the Ar_3 cyclic group is phenyl, unsubstituted by $-Q_1$; and when

 Y_2 is O, R_3 is $-C(O)-CH_2-T_1-R_{11}$, T_1 is O, and R_{11} is $-C(O)-Ar_4$, wherein the Ar_4 cyclic group is 2,5-dichlorophenyl, then R_5 cannot be:

 $-C(O)-R_{10}$, wherein R_{10} is $-Ar_3$ and the Ar_3 cyclic group is 4-(dimethylaminomethyl)phenyl, 4-(N-morpholinomethyl)phenyl, 4-(N-methylpiperazino)methyl)phenyl, 4-(N-(2-

methyl)imidazolylmethyl)phenyl, 5-benzimidazolyl, 5-benztriazolyl, N-carboethoxy-5-benztriazolyl, N-carboethoxy-5-benzimidazolyl, or

-C(O)-OR $_9$, wherein R $_9$ is -CH $_2$ -Ar $_3$, and the Ar $_3$ cyclic group is phenyl, unsubstituted by -Q $_1$,; and when

Y₂ is H₂, R₃ is $-C(0)-CH_2-T_1-R_{11}$, T₁ is O, and R₁₁ is $-C(0)-Ar_4$, wherein the Ar₄ cyclic group is 2,5-dichlorophenyl, then R₅ cannot be:

 $-C(0)-OR_9$, wherein R_9 is $-CH_2-Ar_3$ and the Ar_3 cyclic group is phenyl.

69-78. (canceled)

79. (previously presented) The compound according to claim 68, selected from the group consisting of:

80. (previously presented) A compound represented by the formula:

$$\begin{array}{ccc} \text{(VI)} & & \text{R}_1\text{-N-R}_2 \\ \text{10} & & \text{H} \end{array}$$

wherein:

 R_1 is:

$$\begin{array}{c} R_8 \\ N \\ C \\ O \\ R_5 - N \\ H \\ O \\ R_6 \end{array} \hspace{1cm} ;$$

C is a ring chosen from the set consisting of benzo, pyrido, thieno, pyrrolo, furano, thiazolo, isothiazolo, oxazolo, isoxazolo, pyrimido, imidazolo, cyclopentyl, and cyclohexyl; the ring optionally being singly or multiply substituted by -Q1;

10 R₂ is:

m is 1 or 2;

each R_5 is independently selected from the group consisting of:

$$-C(0)-R_{10}$$
,

```
Application No. 10/058,522
       Supp. Amdt. dated March 11, 2004
                     -C(0)-N(R_{10})(R_{10})
                     -S(0)_2-R_9,
                     -S(0)_2-NH-R_{10},
                     -C(0)-CH_2-O-R_9,
                     -C(0)C(0)-R_{10}
 5
                     -R_9
                     -H,
                     -C(0)C(0)-OR_{10}, and
                     -C(0)C(0)-N(R_9)(R_{10});
              X<sub>5</sub> is CH or N;
10
              Y_2 is H_2 or O;
15
              R_6 is selected from the group consisting of -H and
        -CH_3;
              \ensuremath{R_{\textrm{R}}} is selected from the group consisting of:
                     -C(0)-R_{10}
                     -C(0)0-R9,
                     -C(0)-N(H)-R_{10},
20
                     -S(0)_2-R_9
                     -S(0)_2-NH-R_{10},
                     -C(0) - CH_2 - OR_{10},
                     -C(0)C(0)-R_{10};
25
                    -C(0) - CH_2N(R_{10})(R_{10}),
                    -C(0) - CH_2C(0) - O - R_9
                     -C(O) - CH_2C(O) - R_9,
                     -H, and
                     -C(0)-C(0)-OR_{10};
              each R_9 is independently selected from the group
30
```

consisting of $-Ar_3$ and a $-C_{1-6}$ straight or branched

5

10

15

20

25

alkyl group optionally substituted with $-\mathrm{Ar}_3$, wherein the $-\mathrm{C}_{1-6}$ alkyl group is optionally unsaturated;

each R_{10} is independently selected from the group consisting of -H, -Ar₃, a -C₃₋₆ cycloalkyl group, and a -C₁₋₆ straight or branched alkyl group optionally substituted with -Ar₃, wherein the -C₁₋₆ alkyl group is optionally unsaturated;

 R_{13} is selected from the group consisting of H, Ar₃, and a $-C_{1-6}$ straight or branched alkyl group optionally substituted with $-Ar_3$, $-CONH_2$, $-OR_5$, -OH, $-OR_9$, or $-CO_2H$;

each R_{51} is independently selected from the group consisting of R_9 , $-C(0)-R_9$, $-C(0)-N(H)-R_9$, or each R_{51} taken together forms a saturated 4-8 member carbocyclic ring or heterocyclic ring containing -O-, -S-, or -NH-;

each ${\rm R}_{21}$ is independently selected from the group consisting of -H or a ${\rm -C}_{1-6}$ straight or branched alkyl group;

each Ar_3 is a cyclic group independently selected from the set consisting of an aryl group which contains 6, 10, 12, or 14 carbon atoms and between 1 and 3 rings and an aromatic heterocycle group containing between 5 and 15 ring atoms and between 1 and 3 rings, said heterocyclic group containing at least one heteroatom group selected from -O-, -S-, -SO-, SO_2 , =N-, and -NH-, said heterocycle group optionally containing one or more double bonds, said heterocycle group optionally comprising one or more aromatic rings, and said cyclic

group optionally being singly or multiply substituted by $-Q_1$;

each Q1 is independently selected from the group consisting of $-NH_2$, $-CO_2H$, -C1, -F, -Br, -I, $-NO_2$, -CN, =0, -OH, -perfluoro C_{1-3} alkyl, R_5 , $-OR_5$, $-NHR_5$, $-OR_9$, $-N(R_9)(R_{10})$, $-R_9$, $-C(O)-R_{10}$, and O CH_2 ,

10

15

30

5

provided that when $-\mathrm{Ar}_3$ is substituted with a Q_1 group which comprises one or more additional $-\mathrm{Ar}_3$ groups, said additional $-\mathrm{Ar}_3$ groups are not substituted with another $-\mathrm{Ar}_3$.

81. (previously presented) The compound according to claim 80, wherein:

m is 1;

C is a ring chosen from the set consisting of benzo, pyrido, or thieno the ring optionally being singly or multiply substituted by halogen, $-NH_2$, $-NH-R_5$, $-NH-R_9$, $-OR_{10}$, or $-R_9$, wherein R_9 is a straight or branched C_{1-4} alkyl group, and R_{10} is H or a straight or branched C_{1-4} alkyl group;

 R_6 is H;

 R_{13} is H or a C_{1-4} straight or branched alkyl group optionally substituted with $-Ar_3$, -OH, $-OR_9$, $-CO_2H$, wherein the R_9 is a C_{1-4} branched or straight chain alkyl group; wherein Ar_3 is morpholinyl or phenyl,

wherein the phenyl is optionally substituted by $-Q_1$;

 R_{21} is -H or -CH₃;

5

10

15

20

25

30

 R_{51} is a C_{1-6} straight or branched alkyl group optionally substituted with $-Ar_3$, wherein Ar_3 is phenyl, optionally substituted by $-Q_1$;

each Ar_3 cyclic group is independently selected from the set consisting of phenyl, naphthyl, thienyl, quinolinyl, isoquinolinyl, pyrazolyl, thiazolyl, isoxazolyl, benzotriazolyl, benzimidazolyl, thienothienyl, imidazolyl, thiadiazolyl, benzo[b]thiophenyl, pyridyl, benzofuranyl, and indolyl, and said cyclic group optionally being singly or multiply substituted by $-Q_1$;

each Q₁ is independently selected from the group consisting of $-NH_2$, -Cl, -F, -Br, -OH, $-R_9$, $-NH-R_5$ wherein R_5 is $-C(0)-R_{10}$ or $-S(0)_2-R_9$, $-OR_5$ wherein R_5 is $-C(0)-R_{10}$, $-OR_9$, $-NHR_9$, and

O /\ CH₂,

wherein each R_9 and R_{10} are independently a $-C_{1-6}$ straight or branched alkyl group optionally substituted with $-Ar_3$ wherein Ar_3 is phenyl;

provided that when $-\mathrm{Ar}_3$ is substituted with a Q_1 group which comprises one or more additional $-\mathrm{Ar}_3$ groups, said additional $-\mathrm{Ar}_3$ groups are not substituted with another $-\mathrm{Ar}_3$.

5

15

82. (previously presented) The compound according to claim 81, wherein R_1 is (w2).

83. (previously presented) The compound according to claim 82, selected from the group consisting of:

88. (previously presented) The compound according to claim 80 wherein R_5 is $-C(0)-R_{10}$ or $-C(0)-C(0)-R_{10}$.

- 89. (previously presented) The compound according to claim 88, wherein $\ensuremath{R_{10}}$ is $\ensuremath{Ar_3}.$
- 90. (previously presented) The compound according to claim 89, wherein:

 $\rm R_{5}$ is -C(O)-R_{10} and R_{10} is Ar_{3}, wherein the Ar_{3} cyclic group is phenyl optionally being singly or

multiply substituted by:

 $-R_9$, wherein R_9 is a C_{1-4} straight or branched alkyl group;

-F,

-C1,

5

10

 $-{\rm N\,(H)\,-R_5},$ wherein $-{\rm R_5}$ is -H or -C(O)-R₁₀, wherein $\rm R_{10}$ is a -C₁₋₆ straight or branched alkyl group optionally substituted with -Ar₃, wherein Ar₃ is phenyl,

 $-\text{N}\left(\text{R}_9\right)\left(\text{R}_{10}\right)\text{, wherein R}_9$ and R_{10} are independently a $-\text{C}_{1-4}$ straight or branched alkyl group, or

-O-R $_5$, wherein R $_5$ is H or a -C $_{1-4}$ straight or branched alkyl group.

91. (previously presented) The compound according to claim 90, selected from the group consisting of:

5

- 92. (previously presented) The compound according to claim 90, wherein Ar_3 is phenyl being singly or multiply substituted at the 3- or 5-position by -Cl or at the 4-position by -NH-R₅, -N(R₉)(R₁₀), or -O-R₅.
- 93. (previously presented) The compound 10 according to claim 92, selected from the group consisting of:

94. (canceled)

5

95. (previously presented) The compound according to claim 90, wherein Ar_3 is phenyl being singly or multiply substituted at the 3- or 5-position by $-R_9$, wherein R_9 is a C_{1-4} straight or branched alkyl

group;

5

and at the 4-position by $-O-R_5$.

96. (previously presented) The compound according to claim 95, selected from the group consisting of:

$$\begin{array}{c} \text{HO} \\ \text{HO} \\ \text{HO} \\ \text{HO} \\ \text{CH}_3 \end{array} \hspace{0.5cm} \text{; and} \\ \end{array}$$

5

10

15

97. (canceled)

98. (previously presented) The compound according to claim 89, wherein:

 R_5 is $-C(O)-R_{10}$, wherein R_{10} is Ar_3 and the Ar_3 cyclic group is selected from the group consisting of is indolyl, benzimidazolyl, thienyl, quinolyl, isoquinolyl and benzo[b]thiophenyl, and said cyclic group optionally being singly or multiply substituted by $-Q_1$.

- 99. (previously presented) The compound according to claim 98, wherein the ${\rm Ar}_3$ cyclic group is isoquinolyl, and said cyclic group optionally being singly or multiply substituted by $-{\rm Q}_1$.
- 100. (previously presented) The compound according to claim 99 selected from the group consisting of:

Page 105 of 201

Page 106 of 201

101. (canceled)

5

102. (previously presented) The compound according to claim 89, wherein $\rm R_5$ is -C(O)-R_{10}, wherein $\rm R_{10}$ is Ar_3 and the Ar_3 cyclic group is phenyl, substituted by

103. (canceled)

104. (previously presented) A compound represented by the formula:

(VII)
$$R_1 - N - R_3$$

10 wherein:

5

15

20

m is 1 or 2;

 $\ensuremath{\text{R}}_1$ is selected from the group consisting of the following formulae:

$$(w2) \qquad \begin{array}{c} R_8 \\ N \\ O \\ R_5 - N \\ H \\ O \\ R_6 \end{array} ;$$

C is a ring chosen from the set consisting of benzo, pyrido, thieno, pyrrolo, furano, thiazolo, isothiazolo, oxazolo, isoxazolo, pyrimido, imidazolo, cyclopentyl, and cyclohexyl, the ring optionally being singly or multiply substituted by $-Q_1$,;

R₃ is selected from the group consisting of:

```
Application No. 10/058,522
       Supp. Amdt. dated March 11, 2004
                    -CN,
                    -C(O)-H,
                    -C(0)-CH_2-T_1-R_{11},
                    -C(0)-CH_2-F,
                    -C=N-O-R_9, and
 5
                    -CO-Ar<sub>2</sub>;
              each R5 is independently selected from the group
       consisting of:
                    -C(0)-R_{10},
                    -C(0)0-R<sub>9</sub>,
10
                    -C(0)-N(R_{10})(R_{10})
                    -S(0)_2-R_9,
                    -S(0)_2-NH-R_{10},
                    -C(0) - CH_2 - O - R_9,
                    -C(0)C(0)-R_{10}
15
                    -R<sub>9</sub>,
                    -Н,
                    -C(0)C(0)-OR_{10}, and
                    -C(0)C(0)-N(R_9)(R_{10});
20
              each T_1 is independently selected from the group
        consisting of -O-, -S-, -S(0)-, and -S(0)<sub>2</sub>-;
              R_6 is selected from the group consisting of -H and
       -CH<sub>3</sub>;
25
              R_{8} is selected from the group consisting of:
                    -C(0)-R_{10},
                    -C(O)O-R9,
                    -C(0)-NH-R_{10},
                    -S(0)_2-R_9,
30
                    -S(0)_2-NH-R_{10},
```

Application No. 10/058,522Supp. Amdt. dated March 11, 2004 $-C(0)-CH_2-OR_{10},$ $-C(0)C(0)-R_{10},$ $-C(0)-CH_2-N(R_{10})(R_{10}),$ $-C(0)-CH_2C(0)-O-R_9,$ $-C(0)-CH_2C(0)-R_9,$ -H, and $-C(0)-C(0)-OR_{10};$

each R_9 is independently selected from the group consisting of $-Ar_3$ and a $-C_{1-6}$ straight or branched alkyl group optionally substituted with $-Ar_3$, wherein the $-C_{1-6}$ alkyl group is optionally unsaturated;

each R_{10} is independently selected from the group consisting of -H, -Ar₃, a -C₃₋₆ cycloalkyl group, and a -C₁₋₆ straight or branched alkyl group optionally substituted with -Ar₃, wherein the -C₁₋₆ alkyl group is optionally unsaturated;

each \mathbf{R}_{11} is independently selected from the group consisting of:

 $-Ar_4$, $-(CH_2)_{1-3}-Ar_4$, -H, and $-C(O)-Ar_4$;

10

15

25

 R_{15} is selected from the group consisting of -OH, -OAr₃, -N(H)-OH, and -OC₁₋₆, wherein C₁₋₆ is a straight or branched alkyl group optionally substituted with -Ar₃, -CONH₂, -OR₅, -OH, -OR₉, or -CO₂H;

 ${\rm Ar}_2$ is independently selected from the following group, in which any ring may optionally be singly or

5

10

15

20

25

multiply substituted by $-Q_1$ or phenyl, optionally substituted by Q_1 :

wherein each Y is independently selected from the group consisting of O and S;

each Ar_3 is a cyclic group independently selected from the set consisting of an aryl group which contains 6, 10, 12, or 14 carbon atoms and between 1 and 3 rings and an aromatic heterocycle group containing between 5 and 15 ring atoms and between 1 and 3 rings, said heterocyclic group containing at least one heteroatom group selected from -O-, -S-, -SO-, SO_2 , =N-, and -NH-, $-N(R_5)-$, and $-N(R_9)-$ said heterocycle group optionally containing one or more double bonds, said heterocycle group optionally comprising one or more aromatic rings, and said cyclic group optionally being singly or multiply substituted by $-Q_1$;

each Ar_4 is a cyclic group independently selected from the set consisting of an aryl group which contains 6, 10, 12, or 14 carbon atoms and between 1 and 3 rings, and a heterocycle group containing between 5 and 15 ring atoms and between 1 and 3 rings, said heterocyclic group containing at least one heteroatom group selected from -O-, -S-, -SO-, SO_2 , =N-, -NH-, -N(R_5)-, and -N(R_9)- said heterocycle group optionally

5

10

15

20

containing one or more double bonds, said heterocycle group optionally comprising one or more aromatic rings, and said cyclic group optionally being singly or multiply substituted by $-Q_1$;

provided that when -Ar $_3$ is substituted with a Q $_1$ group which comprises one or more additional -Ar $_3$ groups, said additional -Ar $_3$ groups are not substituted with another -Ar $_3$.

105-111. (canceled)

112. (previously presented) The compound according to claim 104, selected from the group consisting of:

113. (canceled)

114. (previously presented) The compound according to claim 68, wherein:

m is 1;

5

15

 T_1 is 0 or S;

 R_{21} is -H or -CH₃;

 Ar_2 is (hh);

10 Y is O;

each Ar_3 cyclic group is independently selected from the set consisting of phenyl, naphthyl, thienyl, quinolinyl, isoquinolinyl, pyrazolyl, thiazolyl, isoxazolyl, benzotriazolyl, benzimidazolyl, thienothienyl, imidazolyl, thiadiazolyl, benzo[b]thiophenyl, pyridyl, benzofuranyl, and indolyl and said cyclic group being singly or multiply substituted by $-Q_1$;

each Ar₄ cyclic group is independently selected from the set consisting of phenyl, tetrazolyl, pyridinyl, oxazolyl, naphthyl, pyrimidinyl, and thienyl

and said cyclic group being singly or multiply substituted by $-Q_1$;

each Q_1 is independently selected from the group consisting of $-NH_2$, -Cl, -F, -Br, -OH, $-R_9$, $-NH-R_5$ wherein R_5 is $-C(O)-R_{10}$ or $-S(O)_2-R_9$, $-OR_5$ wherein R_5 is $-C(O)-R_{10}$, $-OR_9$, $-NHR_9$, and



5

10

15

20

wherein each R_9 and R_{10} are independently a $-C_{1-6}$ straight or branched alkyl group optionally substituted with $-Ar_3$ wherein Ar_3 is phenyl;

provided that when $-{\rm Ar}_3$ is substituted with a ${\rm Q}_1$ group which comprises one or more additional $-{\rm Ar}_3$ groups, said additional $-{\rm Ar}_3$ groups are not substituted with another $-{\rm Ar}_3$.

115-117. (canceled)

- 118. (previously presented) The compound according to claims 104 or 114, wherein R_5 is $-C(0)-R_{10}$ or $-C(0)C(0)-R_{10}$.
- 119. (previously presented) The compound according to claim 118, wherein R_{10} is Ar_3 .
 - 120. (previously presented) The compound according to claim 119, wherein:

 R_5 is $-C(0)-R_{10}$ and R_{10} is Ar_3 , wherein the Ar_3

cyclic group is phenyl optionally being singly or multiply substituted by:

 $-R_9$, wherein R_9 is a C_{1-4} straight or branched alkyl group;

-F,

5

10

-C1,

 $-{\rm N\,(H)\,-R_5},$ wherein $-{\rm R_5}$ is $-{\rm H~or~-C\,(O)\,-R_{10}},$ wherein ${\rm R_{10}}$ is a $-{\rm C_{1-6}}$ straight or branched alkyl group optionally substituted with $-{\rm Ar_3},$ wherein ${\rm Ar_3}$ is phenyl,

 $-{\rm N\,(R_9)\,(R_{10})}\,,$ wherein ${\rm R_9}$ and ${\rm R_{10}}$ are independently a $-{\rm C_{1-4}}$ straight or branched alkyl group, or

 $-\text{O-R}_5$, wherein R_5 is H or a $-\text{C}_{1-4}$ straight or branched alkyl group.

121. (previously presented) The compound according to claim 120, selected from the group consisting of:

Page 117 of 201

913
$$H_3C-N$$
 CH_3 ; and

5

122. (previously presented) The compound according to claim 120, wherein Ar_3 is phenyl being singly or multiply substituted at the 3- or 5-position by -Cl or at the 4-position by -NH-R₅, -N(R₉)(R₁₀), or -O-R₅.

123. (previously presented) The compound according to claim 122, selected from the group consisting of:

$$\begin{array}{c} HO \\ O \\ \\ H_2N \\ CI \end{array}$$

5

124. (previously presented) The compound according to claim 122, selected from the group consisting of:

125. (previously presented) The compound according to claim 120, wherein Ar_3 is phenyl being singly or multiply substituted at the 3- or 5-position by $-R_9$, wherein R_9 is a C_{1-4} straight or branched alkyl group;

and at the 4-position by $-0-R_5$.

5

10

126. (previously presented) The compound according to claim 125, selected from the group consisting of:

$$\begin{array}{c} \text{HO} \\ \text{O} \\ \text{H}_{3}\text{C} \\ \text{HO} \\ \text{CH}_{3} \end{array}$$

$$\begin{array}{c} \text{HO} \\ \text{O} \\ \text{CH}_{3}\text{C} \\ \text{CH}_{3} \end{array}$$

917
$$H_3C$$
 H_3C H_4 H_5 H_6 H_7 H_8 H_8

127. (previously presented) The compound according to claim 125, wherein the compound is:

5

10

128. (previously presented) The compound according to claim 119, wherein:

 R_5 is $-C(O)-R_{10}$, wherein R_{10} is Ar_3 and the Ar_3 cyclic group is selected from the group consisting of is indolyl, benzimidazolyl, thienyl, quinolyl, isoquinolyl and benzo[b]thiophenyl, and said cyclic group optionally being singly or multiply substituted by $-Q_1$.

129. (previously presented) The compound according to claim 128, selected from the group consisting of:

5

130. (previously presented) The compound according to claim 128, wherein the ${\rm Ar}_3$ cyclic group is isoquinolyl, and said cyclic group optionally being singly or multiply substituted by $-{\rm Q}_1$.

131. (previously presented) The compound according to claim 130, wherein the compound is:

132. (canceled)

 $_{\rm 5}$ 133. (previously presented) The compound according to claim 119, wherein R $_{\rm 5}$ is -C(O)-R $_{\rm 10}$, wherein R $_{\rm 10}$ is Ar $_{\rm 3}$ and the Ar $_{\rm 3}$ cyclic group is phenyl, substituted by

5

10

15

134. (previously presented) The compound according to claim 133, wherein the compound is:

135. (previously presented) The compound according to claim 133, wherein the compound is:

136-137. (canceled)

138. (previously presented) A method for treating or preventing a disease selected from an IGIF mediated disease, an IFN- γ mediated disease, an inflammatory disease, an autoimmune disease, an infectious disease, a proliferative disease, a neurodegenerative disease, a necrotic disease,

5

10

15

20

25

osteoarthritis, acute pancreatitis, chronic pancreatitis, asthma, rheumatoid arthritis, inflammatory bowel disease, Crohn's disease, ulcerative collitis, cerebral ischemia, myocardial ischemia, adult respiratory distress syndrome, infectious hepatitis, sepsis, septic shock, Shigellosis, glomerulonephritis, systemic lupus erythematosus, scleroderma, chronic thyroiditis, Graves' disease, autoimmune gastritis, insulin-dependent diabetes mellitus (Type I), juvenile diabetes, autoimmune hemolytic anemia, autoimmune neutropenia, thrombocytopenia, myasthenia gravis, multiple sclerosis, psoriasis, lichenplanus, graft vs. host disease, acute dermatomyositis, eczema, primary cirrhosis, hepatitis, uveitis, Behcet's disease, acute dermatomyositis, atopic skin disease, pure red cell aplasia, aplastic anemia, amyotrophic lateral sclerosis and nephrotic syndrome comprising the step of administering to said patient a pharmaceutical composition according to claim 42.

139. (previously presented) The method according to claim 138, wherein the disease is selected from an inflammatory disease, an autoimmune disease, an infectious disease, rheumatoid arthritis, ulcerative collitis, Crohn's disease, hepatitis, adult respiratory distress syndrome, glomerulonephritis, insulin-dependent diabetes mellitus (Type I), juvenile diabetes, psoriasis, graft vs. host disease, and hepatitis.

140-153. (canceled)

5

10

15

- 154. (previously presented) A method for preventing or treating inflammation, comprising contacting a cell population with an inhibiting effective amount of a reagent that suppresses the protease activity of at least one member of the interleukin-lbeta-converting enzyme (ICE)/CED-3 family, thereby preventing or treating inflammation, wherein said inflammation is due to an inflammatory disease, and wherein said inflammatory disease is selected from the group consisting of arthritis, cholangitis, colitis, encephalitis, endocerolitis, hepatitis, pancreatitis, and reperfusion injury.
- 155. (currently amended) The method of claim 154 135, wherein said inflammation is chronic inflammation.
 - 156. (currently amended) The method of claim 154 135, wherein said inflammation is acute inflammation.
- 157. (currently amended) The method of claim 20 154 135, wherein the reagent suppresses the protease activity in an irreversible manner.
 - 158. (currently amended) The method of claim $\underline{154}$ $\underline{135},$ wherein the reagent suppresses the protease activity in a reversible manner.
- 159. (currently amended) The method of claim $\frac{154}{135}$, wherein the reagent is a compound of formula 1:

$$R^2$$
 CO_2R^3
 R^1
 O
 A
 H
 CO_2R^3

FORMULA 1

wherein:

5

10

15

20

n is 1 or 2;

 $\rm R^1$ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $\rm (CH_2)_m CO_2 R^4$, wherein m=1-4, and $\rm R^4$ is as defined below;

 R^2 is a hydrogen atom, chloro, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_pCO_2R_5$, wherein p=0-4, and R^5 is as defined below;

R³ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

R⁴ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

R⁵ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

A is a natural and unnatural amino acid;

5

10

15

20

25

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl, halomethyl, CH_2ZR^6 , $CH_2OCO(aryl)$, $CH_2OCO(heteroaryl)$; or $CH_2OPO(R_7)R_8$; where Z is an oxygen or a sulfur atom;

R⁶ is phenyl, substituted phenyl, phenylalkyl, substituted phenylalkyl, heteroaryl, or (heteroaryl)alkyl; and

R⁷ and R⁸ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl, (substituted phenyl) alkyl, and (cycloalkyl) alkyl; and

X and Y are independently selected from the group consisting of a hydrogen atom, halo, trihalomethyl, amino, protected amino, an amino salt, mono-substituted amino, di-substituted amino, carboxy, protected carboxy, a carboxylate salt, hydroxy, protected hydroxy, a salt of a hydroxy group, lower alkoxy, lower alkylthio, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, (cycloalkyl)alkyl, substituted (cycloalkyl)alkyl, phenyl, substituted phenyl, phenylalkyl, and (substituted phenyl)alkyl;

or a pharmaceutically acceptable salt thereof.

160. (currently amended) The method of claim $\frac{154}{3}$, wherein the reagent is a compound of formula 3:

$$A \longrightarrow N \\ H \longrightarrow O \\ O \longrightarrow NH \\ (CH_2)m \\ O \\ CO_2R^1$$

FORMULA 3

wherein:

5

n is 1 or 2;

m is 1 or 2;

A is R^2CO- , $R^3-O-CO-$, or R^4SO_2- , a group of the formula:

$$R^{5}CONH$$
 R^{8}
 $R^{6}OCONH$
 R^{8}
 $R^{7}SO_{2}NH$
 R^{8}
 R^{8}

Application No. 10/058,522 Supp. Amdt. dated March 11, 2004 further wherein: R1 is a hydrogen atom, alkyl or phenylalkyl; R^2 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; 5 R3 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl; R4 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted 10 phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; R⁵ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; R⁶ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl; 15 R⁷ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl) alkyl, heteroaryl, or (heteroaryl) alkyl; R8 is an amino acid side chain chosen from the group consisting of natural and unnatural amino acids; 20 B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, (heteroaryl)alkyl, or halomethyl; a group of the formula: 25 -CH₂XR⁹; wherein R9 is phenyl, substituted phenyl, phenylalkyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; and X is an oxygen or a sulfur atom; 30 a group of the formula: $-CH_2-O-CO-(ARYL);$ a group of the formula: -CH₂-O-CO-(HETEROARYL);

5

10

15

20

a group of the formula:

 $-CH_2-O-PO\left(R^{10}\right)R^{11} \ wherein \ R^{10} \ and \ R^{11} \ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl and (substituted phenyl) alkyl; and the pharmaceutically-acceptable salts thereof.$

- 161. (New) A method for preventing or treating inflammation, comprising contacting a cell population with an inhibiting effective amount of a reagent that suppresses the protease activity of at least one member of the interleukin-1 beta-converting enzyme (ICE)/CED-3 family, thereby preventing or treating inflammation.
- 162. (New) The method of claim 161, wherein said inflammation is chronic inflammation.
 - 163. (New) The method of claim 161, wherein said inflammation is acute inflammation.
- 164. (New) The method of claim 161, wherein said inflammation is due to an inflammatory disease.
 - 165. (New) The method of claim 164, wherein said inflammatory disease is selected from the group consisting of septic shock, septicemia, and adult respiratory distress syndrome.
- 25 166. (New) The method of claim 161, wherein the reagent suppresses the protease activity in an irreversible manner.

167. (New) The method of claim 161, wherein the reagent suppresses the protease activity in a reversible manner.

168. (New) The method of claim 161, wherein the reagent is a compound of formula 1:

$$R^2$$
 CO_2R^3
 R^1
 CO_2R^3
FORMULA 1

wherein:

n is 1 or 2;

 R^1 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_mCO_2R^4$, wherein m=1-4, and R^4 is as defined below;

 R^2 is a hydrogen atom, chloro, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_pCO_2R^5$, wherein p=0-4, and R^5 is as defined below;

R³ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

5

20

25

R⁴ is a hydrogen atom alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

R⁵ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

A is a natural and unnatural amino acid;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl,

(substituted)phenyl, phenylalkyl,

(substituted)phenylalkyl, heteroaryl,

(heteroaryl)alkyl, halomethyl, CH₂ZR⁶, CH₂OCO(aryl),

CH₂OCO(heteroaryl); or CH₂OPO(R⁷)R⁸

where Z is an oxygen or a sulfur atom;

R⁶ is phenyl, substituted phenyl, phenylalkyl, substituted phenylalkyl, heteroaryl, or (heteroaryl)alkyl; and

R⁷ and R⁸ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl, (substituted phenyl) alkyl, and (cycloalkyl) alkyl; and

X and Y are independently selected from the group consisting of a hydrogen atom, halo, trihalomethyl, amino, protected amino, an amino salt, mono-substituted amino, di-substituted amino, carboxy, protected carboxy, a carboxylate salt, hydroxy, protected

hydroxy, a salt of a hydroxy group, lower alkoxy, lower alkylthio, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, (cycloalkyl)alkyl, substituted (cycloalkyl)alkyl, phenyl, substituted phenyl, phenylalkyl, and (substituted phenyl)alkyl;

or a pharmaceutically acceptable salt thereof.

169. (New) The method of claim 161, wherein the reagent is a compound of formula 3:

A
$$\stackrel{N}{\underset{\text{CO}_2\mathbb{R}^1}{\text{NH}}}$$
 $\stackrel{\text{CH}_2)_n}{\underset{\text{CO}_2\mathbb{R}^1}{\text{NH}}}$ $\stackrel{\text{FORMULA 3}}{\underset{\text{wherein:}}{\text{NH}}}$

10

5

n is 1 or 2; m is 1 or 2; A is R^2CO- , $R^3-O-CO-$, or R^4SO_2- ; a group of the formula:

$$R^{5}CONH$$
 R^{8}
;
 $R^{6}OCONH$
 R^{8}
 $R^{7}SO_{2}NH$
 R^{8}
;

further wherein:

5

10

R1 is a hydrogen atom, alkyl or phenylalkyl;

R² is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R³ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl;

R⁴ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁵ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁶ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl,
or (substituted phenyl)alkyl;

Supp. Amdt. dated March 11, 2004 R⁷ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; R⁸ is an amino acid side chain chosen from the group 5 consisting of natural and unnatural amino acids; B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, (heteroaryl)alkyl, or halomethyl; a group of the formula: 10 -CH₂XR⁹;wherein R9 is phenyl, substituted phenyl, phenylalkyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; and X is an oxygen or a sulfur atom; a group of the formula: 15 $-CH_2-O-CO-(ARYL);$ a group of the formula: -CH₂-O-CO-(HETEROARYL); a group of the formula: -CH2-O-PO (R10) R11 20

Application No. 10/058,522

5

10

15

wherein R¹⁰ and R¹¹ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl and (substituted phenyl) alkyl; and the pharmaceutically-acceptable salts thereof.

170. (New) A composition comprising a cosmetic, a reagent that suppresses the protease activity of at least one member of the interleukin-1 beta-converting enzyme (ICE)/CED-3 family and a cosmetically or dermatologically acceptable carrier, adapted for preventing or ameliorating irritation of the skin of a mammal due to said cosmetic.

171. (New) The composition of claim 170, wherein the reagent suppresses the protease activity in an irreversible manner.

172.(New) The composition of claim 170, wherein the reagent suppresses the protease activity in a reversible manner.

173. (New) The composition of claim 170, wherein the reagent is a compound of formula 1:

$$R^2$$
 CO_2R^3
 R^1
 CO_2R^3

FORMULA 1

wherein:

5

10

15

25

n is 1 or 2; $R^1 \text{ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl,} \\ \text{(substituted)phenyl, phenylalkyl,} \\ \text{(substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl} \\ \text{or } (CH_2)_mCO_2R^4 \text{ wherein } m=1-4, \text{ and } R^4 \text{ is as defined below;} \\ \text{(substituted)phenylalkyl,} \\ \text{(substituted)phenyla$

 R^2 is a hydrogen atom, chloro, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_pCO_2R^5$, wherein p=0-4, and R^5 is as defined below;

R³ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

R⁴ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

R⁵ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

A is a natural and unnatural amino acid;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl,

10

15

20

(substituted) phenylalkyl, heteroaryl, (heteroaryl) alkyl, halomethyl, CH_2ZR^6 , $CH_2OCO(aryl)$, $CH_2OCO(heteroaryl)$; or $CH_2OPO(R^7)R^8$

where Z is an oxygen or a sulfur atom;

5 R⁶ is phenyl, substituted phenyl, phenylalkyl, substituted phenylalkyl, heteroaryl, or (heteroaryl)alkyl; and

R⁷ and R⁸ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl, (substituted phenyl) alkyl, and (cycloalkyl) alkyl; and

X and Y are independently selected from the group consisting of a hydrogen atom, halo, trihalomethyl, amino, protected amino, an amino salt, mono-substituted amino, di-substituted amino, carboxy, protected carboxy, a carboxylate salt, hydroxy, protected hydroxy, a salt of a hydroxy group, lower alkoxy, lower alkylthio, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, (cycloalkyl)alkyl, substituted (cycloalkyl)alkyl, phenyl, substituted phenyl, phenylalkyl, and (substituted phenyl)alkyl;

or a pharmaceutically acceptable salt thereof.

174. (New) The composition of claim 170, wherein the reagent is a compound of formula 3:

$$A \longrightarrow N \\ H \longrightarrow O \\ O \longrightarrow NH \\ (CH_2)_m \\ O \longrightarrow CO_2R^1$$

FORMULA 3

wherein:

n is 1 or 2;

m is 1 or 2;

A is $R^{2}CO^{-}$, $R^{3}^{-}O^{-}CO^{-}$, or $R^{4}SO_{2}^{-}$;

a group of the formula:

$$R^5CONH$$
 R^8
;
 R^6OCONH
 R^8
or

further wherein:

R¹ is a hydrogen atom, alkyl or phenylalkyl;

R² is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R³ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl,
or (substituted phenyl)alkyl;

R⁴ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁵ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁶ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl;

R⁷ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

 R^8 is an amino acid side chain chosen from the group consisting of natural and unnatural amino acids;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, (heteroaryl)alkyl, or halomethyl; a group of the formula:

--CH₂XR⁹;

20

wherein R⁹ is phenyl, substituted phenyl, phenylalkyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; and X is an oxygen or a sulfur atom;

- a group of the formula:
- 5 $-CH_2-O-CO-(ARYL)$;
 - a group of the formula:
 - -CH₂-O-CO-(HETEROARYL);
 - a group of the formula:
 - -CH2-O-PO (R10) R11
- wherein R¹⁰ and R¹¹ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl and (substituted phenyl) alkyl; and the pharmaceutically-acceptable salts thereof.
- 175. (New) A method for preventing or ameliorating inflammation due to contact of the skin of a mammal with an irritant comprising contacting the skin with a reagent that suppresses the protease activity of at least one member of the interleukin-lbeta-converting enzyme (ICE)/CED-3 family.
 - 176. (New) The method of claim 175, wherein the irritant is a chemical irritant.
 - 177. (New) The method of claim 176, wherein the chemical irritant is a cosmetic.
- 178. (New) The method of claim 176, wherein the chemical irritant is from a plant.

5

10

179. (New) The method of claim 178, wherein the plant is selected from the group consisting of Poison Ivy, Poison Oak, and Poison Sumac.

180. (New) The method of claim 175, wherein the irritant is radiation.

181. (New) The method of claim 180, wherein the radiation is ultraviolet radiation.

182. (New) The method of claim 175, wherein the reagent suppresses the protease activity in an irreversible manner.

183. (New) The method of claim 175, wherein the reagent suppresses the protease activity in a reversible manner.

184. (New) The method of claim 175, wherein the reagent is a compound of formula 1:

FORMULA 1

wherein:

Application No. 10/058,522 Supp. Amdt. dated March 11, 2004 n is 1 or 2;

5

10

20

25

 R^1 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_mCO_2R^4$, wherein m=1-4, and R^4 is as defined below;

 R^2 is a hydrogen atom, chloro, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_pCO_2R^5$, wherein p=0-4, and R^5 is as defined below;

R³ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl) alkyl, phenylalkyl, or (substituted) phenylalkyl;

R⁴ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

R⁵ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

A is a natural and unnatural amino acid;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl,

(heteroaryl)alkyl, halomethyl, CH_2ZR^6 , $CH_2OCO(aryl)$, $CH_2OCO(heteroaryl)$; or $CH_2OPO(R^7)R^8$

where Z is an oxygen or a sulfur atom;

R⁶ is phenyl, substituted phenyl, phenylalkyl, substituted phenylalkyl, heteroaryl, or (heteroaryl)alkyl; and

R⁷ and R⁸ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl, (substituted phenyl) alkyl, and (cycloalkyl) alkyl; and

X and Y are independently selected from the group consisting of a hydrogen atom, halo, trihalomethyl, amino, protected amino, an amino salt, mono-substituted amino, di-substituted amino, carboxy, protected carboxy, a carboxylate salt, hydroxy, protected hydroxy, a salt of a hydroxy group, lower alkoxy, lower alkylthio, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, (cycloalkyl)alkyl, substituted (cycloalkyl)alkyl, phenyl, substituted phenyl, phenylalkyl, and (substituted phenyl)alkyl;

or a pharmaceutically acceptable salt thereof.

185. (New) The method of claim 175, wherein the reagent is a compound of formula 3:

$$A \longrightarrow N \\ H \longrightarrow O \\ O \longrightarrow NH \\ (CH_2)m \\ O \longrightarrow CO_2R^1$$

FORMULA 3

wherein:

5

n is 1 or 2;

m is 1 or 2;

A is R^2CO -, R^3 -O-CO-, or R^4SO_2 -;

a group of the formula:

$$R^5CONH$$
 R^8
 R^8
 R^8
 R^8
 R^8
 R^8
 R^8
 R^8
 R^8
 R^8

further wherein:

R1 is a hydrogen atom, alkyl or phenylalkyl;

R² is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R³ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl,
or (substituted phenyl)alkyl;

R⁴ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁵ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁶ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl;

R⁷ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁸ is an amino acid side chain chosen from the group consisting of natural and unnatural amino acids;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, (heteroaryl)alkyl, or halomethyl;

a group of the formula:

--CH₂XR⁹;

20

wherein R⁹ is phenyl, substituted phenyl, phenylalkyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; and X is an oxygen or a sulfur atom;

a group of the formula:

- 5 -CH₂ -O-CO-(ARYL);
 a group of the formula:
 -CH₂-O-CO-(HETEROARYL);
 a group of the formula:
 -CH₂-O-PO(R¹⁰)R¹¹
- wherein R¹⁰ and R¹¹ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl and (substituted phenyl) alkyl; and the pharmaceutically-acceptable salts thereof.
- 186. (New) A composition comprising a reagent that suppresses the protease activity of at least one member of the interleukin-l beta-converting enzyme (ICE)/CED-3 family formulated for topical administration for use in preventing or ameliorating inflammation due to skin irritation.
 - 187. (New) The composition of claim 186, wherein said formulation is selected from a lotion, a cream, a gel, a liquid, a solid, or a semisolid.
- 188. (New) The composition of claim 186, wherein the skin irritation is due to contact of the skin with a chemical irritant.

- 189. (New) The composition of claim 188, wherein the chemical irritant is a cosmetic or an agent derived from a plant.
- 190. (New) The composition of claim 186, wherein the irritant is radiation.
 - 191. (New) The composition of claim 186, wherein the irritation is due to an insect sting.
 - 192. (New) The composition of claim 186, wherein the irritation is due to an insect bite.
- 193. (New) The composition of claim 186, wherein the irritation is due to tissue damage.
 - 194. (New) The composition of claim 186, wherein the tissue damage is due to physical trauma or disease.
- 195. (New) The composition of claim 193, wherein the tissue (physical trauma or disease) damage is selected from the group consisting of a bum, a scrape, a cut, frostbite, and chemical injury.
- 196. (New) The composition of claim 186,
 wherein the reagent suppresses the protease activity in an irreversible manner.
 - 197. (New) The composition of claim 186, wherein the reagent suppresses the protease activity in a reversible manner.

198. (New) The composition of claim 186, wherein the reagent is a compound of formula 1:

$$R^2$$
 CO_2R^3
 R^3
 R^4
 R^4

FORMULA 1

wherein:

5 n is 1 or 2;

 R^1 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_mCO_2R^4$ wherein m=1-4, and R^4 is as defined below;

- 10 R^2 is a hydrogen atom, chloro, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_pCO_2R^5$, wherein p=0-4, and R^5 is as defined below;
- 15 R³ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

10

20

R4 is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

R⁵ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

A is a natural and unnatural amino acid;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl, halomethyl, CH₂ZR⁶, CH₂OCO(aryl), CH₂OCO(heteroaryl); or CH₂OPO(R⁷)R⁸

where Z is an oxygen or a sulfur atom;

R⁶ is phenyl, substituted phenyl, phenylalkyl, substituted phenylalkyl, heteroaryl, or (heteroaryl)alkyl; and

R⁷ and R⁸ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl, (substituted phenyl) alkyl, and (cycloalkyl) alkyl; and

X and Y are independently selected from the group consisting of a hydrogen atom, halo, trihalomethyl, amino, protected amino, an amino salt, mono-substituted amino, di-substituted amino, carboxy, protected carboxy, a carboxylate salt, hydroxy, protected hydroxy, a salt of a hydroxy group, lower alkoxy, lower alkylthio, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, (cycloalkyl)alkyl, substituted (cycloalkyl)alkyl, phenyl, substituted phenyl, phenylalkyl, and (substituted phenyl)alkyl;

or a pharmaceutically acceptable salt thereof.

199. (New) The composition of claim 186, wherein the reagent is a compound of formula 3:

$$A = N \\ N \\ O \\ O \\ C \\ NH \\ O \\ CO_2R^1$$

FORMULA 3

wherein:

5

10

n is 1 or 2;

m is 1 or 2;

A is R^2CO- , $R^3-O-CO-$, or R^4SO_2- ; a group of the formula:

$$R^5CONH$$
 $\stackrel{}{\underset{R^8}{\longrightarrow}}$
 $\stackrel{}{\underset{R^8}{\longrightarrow}}$
 $\stackrel{}{\underset{R^8}{\longrightarrow}}$
 $\stackrel{}{\underset{R^8}{\longrightarrow}}$
 $\stackrel{}{\underset{R^8}{\longrightarrow}}$
 $\stackrel{}{\underset{R^8}{\longrightarrow}}$
 $\stackrel{}{\underset{R^8}{\longrightarrow}}$
 $\stackrel{}{\underset{R^8}{\longrightarrow}}$
 $\stackrel{}{\underset{R^8}{\longrightarrow}}$

further wherein:

15

R¹ is a hydrogen atom, alkyl or phenylalkyl;

R² is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R³ is alkyl, cycloalkyl, (cycloalkyl) alkyl, phenylalkyl, or (substituted phenyl) alkyl;

10 R⁴ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁵ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

Supp. Amdt. dated March 11, 2004 R⁶ is alkyl, cycloalkyl, (cycloalkyl) alkyl, phenylalkyl, or (substituted phenyl)alkyl; R⁷ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; 5 R8 is an amino acid side chain chosen from the group consisting of natural and unnatural amino acids; B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, 10 substituted phenyl, (substituted phenyl)alkyl, heteroaryl, (heteroaryl)alkyl, or halomethyl; a group of the formula: -CH₂XR⁹;wherein R9 is phenyl, substituted phenyl, phenylalkyl, (substituted phenyl)alkyl, heteroaryl, or 15 (heteroaryl)alkyl; and X is an oxygen or a sulfur atom; a group of the formula: $-CH_2-O-CO-(ARYL);$ a group of the formula: -CH₂-O-CO-(HETEROARYL); 20 a group of the formula: -CH₂-O-PO (R¹⁰) R¹¹ wherein R^{10} and R^{11} are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, 25 substituted phenyl, phenylalkyl and (substituted phenyl) alkyl; and the pharmaceutically-acceptable salts thereof.

Application No. 10/058,522

5

15

- 200. (New) A method for preventing or ameliorating inflammation due to contact of a tissue of a mammal with an irritant comprising contacting said tissue with a reagent that suppresses the protease activity of at least one member of the interleukin-1 beta-converting enzyme (ICE)/CED-3 family.
- 201. (New) The method of claim 200, wherein the irritant is a chemical irritant.
- 202. (New) The method of claim 201, wherein the chemical irritant is a cosmetic.
 - 203. (New) The method of claim 201, wherein the chemical irritant is from a plant.
 - 204. (New) The method of claim 203, wherein the plant is selected from the group consisting of Poison Ivy, Poison Oak, and Poison Sumac.
 - 205. (New) The method of claim 200, wherein the irritant is radiation.
 - 206. (New) The method of claim 205, wherein the radiation is ultraviolet radiation.
- 207. (New) The method of claim 200, wherein the irritant is a bacteria.
 - 208. (New) The method of claim 200, wherein the reagent suppresses the protease activity in an irreversible manner.

209. (New) The method of claim 200, wherein the reagent suppresses the protease activity in a reversible manner.

210. (New) The method of claim 200, wherein the reagent is a compound of formula 1:

FORMULA 1

wherein:

10

15

n is 1 or 2;

 R^1 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_mCO_2R^4$, wherein m=1-4, and R^4 is as defined below;

 R^2 is a hydrogen atom, chloro, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_pCO_2R^5$, wherein p=0-4, and R^5 is as defined below;

5

20

R³ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

R⁴ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

R⁵ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

10 A is a natural and unnatural amino acid;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl,

(heteroaryl)alkyl, halomethyl, CH₂ZR⁶, CH₂OCO(aryl), CH₂OCO(heteroaryl); or CH₂OPO(R⁷)R⁸

where Z is an oxygen or a sulfur atom;

R⁶ is phenyl, substituted phenyl, phenylalkyl, substituted phenylalkyl, heteroaryl, or (heteroaryl)alkyl; and

R⁷ and R⁸ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl, (substituted phenyl) alkyl, and (cycloalkyl) alkyl; and

X and Y are independently selected from the group consisting of a hydrogen atom, halo, trihalomethyl, amino, protected amino, an amino salt, mono-substituted amino, di-substituted amino, carboxy, protected carboxy, a carboxylate salt, hydroxy, protected hydroxy, a salt of a hydroxy group, lower alkoxy, lower alkylthio, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, (cycloalkyl)alkyl, substituted (cycloalkyl)alkyl, phenyl, substituted phenyl, phenylalkyl, and (substituted phenyl)alkyl;

or a pharmaceutically acceptable salt thereof.

211. (New) The method of claim 200, wherein the reagent is a compound of formula 3:

15 FORMULA 3

5

10

wherein:

n is 1 or 2;

m is 1 or 2;

A is R^2CO- , $R^3-O-CO-$, or R^4SO_2- ; a group of the formula:

$$R^5CONH$$
 ξ ; R^6OCONH ξ or

$$R^7SO_2NH$$
 ξ ;

further wherein:

 R^1 is a hydrogen atom, alkyl or phenylalkyl;

R² is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

10 R³ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl;

R⁴ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁵ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

Supp. Amdt. dated March 11, 2004 R⁶ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl; R⁷ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted 5 phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; R⁸ is an amino acid side chain chosen from the group consisting of natural and unnatural amino acids; B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, 10 heteroaryl, (heteroaryl)alkyl, or halomethyl; a group of the formula: -CH₂XR⁹;wherein R9 is phenyl, substituted phenyl, phenylalkyl, (substituted phenyl) alkyl, heteroaryl, or 15 (heteroaryl)alkyl; and X is an oxygen or a sulfur atom; a group of the formula: $-CH_2-O-CO-(ARYL);$ a group of the formula: -CH₂-O-CO-(HETEROARYL); 20 a group of the formula: -CH2-O-PO (R10) R11 wherein R^{10} and R^{11} are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, 25 substituted phenyl, phenylalkyl and (substituted

Application No. 10/058,522

5

phenyl) alkyl; and the pharmaceutically-acceptable salts thereof.

- 212. (New) A method for preventing or ameliorating inflammation associated with tissue damage comprising contacting said tissue with a reagent that suppresses the protease activity of at least one member of the interleukin-1 beta-converting enzyme (ICE)/CED-3 family.
- 213. (New) The method of claim 212, wherein said tissue damage is due to physical trauma.
 - 214. (New) The method of claim 212, wherein said tissue damage is due to an autoimmune response.
 - 215. (New) The method of claim 212, wherein said tissue damage is due to an infectious disease.
- 15 216. (New) The method of claim 212, wherein said tissue damage is due to chronic disease.
 - 217. (New) The method of claim 212, wherein said tissue damage is spinal or brain trauma.
- 218. (New) The method of claim 212, wherein said tissue damage is due to an acid.
 - 219. (New) The method of claim 212, wherein said tissue damage is due to a base.
 - 220. (New) The method of claim 212, wherein said tissue damage is due to radiation.

221. (New) The method of claim 212, wherein the reagent suppresses the protease activity in an irreversible manner.

222. (New) The method of claim 212, wherein the reagent suppresses the protease activity in a reversible manner.

223. (New) The method of claim 212, wherein the reagent is a compound of formula 1:

FORMULA 1

10 wherein:

15

n is 1 or 2;

 R^1 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_mCO_2R^4$, wherein m=1-4, and R^4 is as defined below;

R² is a hydrogen atom, chloro, alkyl, cycloalkyl, (cycloalkyl) alkyl, phenyl, (substituted) phenyl, phenylalkyl, (substituted) phenylalkyl, heteroaryl,

5

15

(heteroaryl)alkyl or $(CH_2)_pCO_2R^5$, wherein p=0-4, and R^5 is as defined below;

R³ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

R⁴ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

R⁵ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

A is a natural and unnatural amino acid;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl, halomethyl, CH₂ZR⁶, CH₂OCO(aryl), CH₂OCO(heteroaryl); or CH₂OPO(R⁷)R⁸

where Z is an oxygen or a sulfur atom;

20 R⁶ is phenyl, substituted phenyl, phenylalkyl, substituted phenylalkyl, heteroaryl, or (heteroaryl)alkyl; and

 ${\ensuremath{\mathsf{R}}}^7$ and ${\ensuremath{\mathsf{R}}}^8$ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted

5

10

phenyl, phenylalkyl, (substituted phenyl) alkyl, and (cycloalkyl) alkyl; and

X and Y are independently selected from the group consisting of a hydrogen atom, halo, trihalomethyl, amino, protected amino, an amino salt, mono-substituted amino, di-substituted amino, carboxy, protected carboxy, a carboxylate salt, hydroxy, protected hydroxy, a salt of a hydroxy group, lower alkoxy, lower alkylthio, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, (cycloalkyl)alkyl, substituted (cycloalkyl)alkyl, phenyl, substituted phenyl, phenylalkyl, and (substituted phenyl)alkyl;

or a pharmaceutically acceptable salt thereof.

15 224. (New) The method of claim 212, wherein the reagent is a compound of formula 3:

$$A = N \\ N \\ N \\ O \\ O \\ N \\ N \\ C \\ O_2 \\ R^1$$

FORMULA 3

wherein:

n is 1 or 2;

m is 1 or 2;

A is R^2CO^- , $R^3^-O^-CO^-$, or $R^4SO_2^-$;

a group of the formula:

$$R^5CONH$$
 R^8
; R^6OCONH
 R^8
or

5 further wherein:

R1 is a hydrogen atom, alkyl or phenylalkyl;

R² is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

10 R³ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl;

R⁴ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

Supp. Amdt. dated March 11, 2004 R⁵ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; R⁶ is alkyl, cycloalkyl, (cycloalkyl) alkyl, phenylalkyl, 5 or (substituted phenyl)alkyl; R7 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; R^8 is an amino acid side chain chosen from the group consisting of natural and unnatural amino acids; 10 B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, (heteroaryl)alkyl, or halomethyl; a group of the formula: 15 -CH₂XR⁹;wherein R9 is phenyl, substituted phenyl, phenylalkyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; and X is an oxygen or a sulfur atom; 20 a group of the formula: $-CH_2-O-CO-(ARYL)$; a group of the formula: -CH₂-O-CO-(HETEROARYL); a group of the formula: -CH₂-O-PO (R¹⁰) R¹¹ 25

Application No. 10/058,522

5

10

15

wherein R^{10} and R^{11} are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl and (substituted phenyl) alkyl; and the pharmaceutically-acceptable salts thereof.

- 225. (New) A composition comprising a reagent that suppresses the protease activity of at least one member of the interleukin-lbeta-converting enzyme (ICE)/CED-3 family and a pharmaceutical, dermatological, or cosmetic carrier formulated for topical application to the skin or mucus membrane of an animal.
 - 226. (New) The composition of claim 225, wherein said composition ameliorates symptoms associated with an inflammatory response.
 - 227. (New) The composition of claim 226, wherein said symptoms comprise itching, redness, or swelling.
- 228. (New) The composition of claim 225, wherein said composition is useful in decreasing loss of collagen or maintaining skin elasticity and appearance.
- 229. (New) The composition of claim 225, wherein the reagent suppresses the protease activity in an irreversible manner.

230. (New) The composition of claim 225, wherein the reagent suppresses the protease activity in a reversible manner.

231. (New) The composition of claim 225, wherein the reagent is a compound of formula 1:

$$R^2$$
 R^2
 CO_2R^3
 R^1
 R^2
 R^2
 R^2
 R^2
 R^2
 R^3

FORMULA 1

wherein:

n is 1 or 2;

 R^1 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_mCO_2R^4$, wherein m=1-4, and R^4 is as defined below;

R² is a hydrogen atom, chloro, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or (CH₂)_pCO₂R⁵, wherein p=0-4, and R⁵ is as defined below;

R³ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

R⁴ is a hydrogen atom, alkyl, cycloalkyl,
5 (cycloalkyl)alkyl, phenylalkyl, or
 (substituted)phenylalkyl;

R⁵ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

10 A is a natural and unnatural amino acid;

15

20

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl, halomethyl, CH₂ZR⁶, CH₂OCO(aryl), CH₂OCO(heteroaryl); or CH₂OPO(R⁷)R⁸

where Z is an oxygen or a sulfur atom;

R⁶ is phenyl, substituted phenyl, phenylalkyl, substituted phenylalkyl, heteroaryl, or (heteroaryl)alkyl; and

R⁷ and R⁸ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl, (substituted phenyl) alkyl, and (cycloalkyl) alkyl; and

X and Y are independently selected from the group consisting of a hydrogen atom, halo, trihalomethyl, amino, protected amino, an amino salt, mono-substituted amino, di-substituted amino, carboxy, protected carboxy, a carboxylate salt, hydroxy, protected hydroxy, a salt of a hydroxy group, lower alkoxy, lower alkylthio, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, (cycloalkyl)alkyl, substituted (cycloalkyl)alkyl, phenyl, substituted phenyl, phenylalkyl, and (substituted phenyl)alkyl;

or a pharmaceutically acceptable salt thereof.

232. (New) The composition of claim 225, wherein the reagent is a compound of formula 3:

$$\begin{array}{c|c} A & N \\ N \\ N \\ O \\ O \\ O \\ C \\ C \\ C \\ C \\ C \\ C \\ R^1 \end{array}$$

FORMULA 3

wherein:

5

10

n is 1 or 2;

m is 1 or 2;

A is $R^{2}CO_{-}$, $R^{3}-O_{-}CO_{-}$, or $R^{4}SO_{2}^{-}$;

a group of the formula:

$$R^5CONH$$
 R^8
;
 R^6OCONH
 R^8
or

further wherein:

15

R¹ is a hydrogen atom, alkyl or phenylalkyl;

R² is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R³ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl;

10 R⁴ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁵ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁶ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl;

R⁷ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁸ is an amino acid side chain chosen from the group consisting of natural and unnatural amino acids;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, (heteroaryl)alkyl, or halomethyl;

10 a group of the formula:

-CH₂XR⁹;

25

wherein R⁹ is phenyl, substituted phenyl, phenylalkyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; and X is an oxygen or a sulfur atom;

a group of the formula: $-CH_2-O-CO-(ARYL);$ a group of the formula: $-CH_2-O-CO-(HETEROARYL);$ a group of the formula: $-CH_2-O-PO(R^{10})R^{11}$

wherein R¹⁰ and R¹¹ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl and (substituted phenyl) alkyl; and the pharmaceutically-acceptable salts thereof.

5

20

25

- 233. (New) A method for reducing inflammation of a tissue, comprising contacting said tissue with an effective amount of a reagent that suppresses the protease activity of at least one member of the interleukin-lbeta-converting enzyme (ICE)/CED-3 family, thereby reducing inflammation of said tissue.
- 234. (New) The method of claim 233, wherein said tissue is skin.
- 235. (New) The method of claim 234, wherein said tissue inflammation is due to trauma, sunburn, eczema, contact allergy, dermatitis, psoriasis, erysipelas, acne, ingrown nails, cuts, burns, insect bites, insect stings, or pruritus.
- 236. (New) The method of claim 233, wherein said tissue is mucosa.
 - 237. (New) The method of claim 233, wherein said tissue inflammation is due to vaginitis, hemorrhoids, conjunctivitis, periodontitis, wisdom tooth eruption, teeth extraction, gingivitis, periodontal abscesses, or prosthesis.
 - 238. (New) A method for ameliorating or treating infectious disease, comprising contacting a cell population with an inhibiting effective amount of a reagent that suppresses the protease activity of at least one member of the interleukin-1 beta-converting enzyme (ICE)/CED-3 family, thereby ameliorating or treating infectious disease.

239. (New) The method of claim 238, wherein said infectious disease is viral.

240. (New) The method of claim 238, wherein said contacting is in vitro.

5 241. (New) The method of claim 238, wherein said contacting is in vivo.

242. (New) The method of claim 238, wherein the reagent suppresses the protease activity in an irreversible manner.

10 243. (New) The method of claim 238, wherein the reagent suppresses the protease activity in a reversible manner.

244. (New) The method of claim 238, wherein the reagent is a compound of formula 1:

$$R^2$$
 CO_2R^3
 R^1
 CO_2R^3

FORMULA 1

wherein:

n is 1 or 2;

5

10

20

25

 R^1 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_mCO_2R^4$, wherein m=1-4, and R^4 is as defined below:

 R^2 is a hydrogen atom, chloro, alkyl, cycloalkyl,(cycloalkyl)alkyl, phenyl,(substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_pCO_2R^5$, wherein p=0-4, and R^5 is as defined below;

R³ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

R⁴ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or \ (substituted)phenylalkyl;

R⁵ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

A is a natural and unnatural amino acid;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl, halomethyl, CH₂ZR⁶, CH₂OCO(aryl), CH₂OCO(heteroaryl); or CH₂OPO(R⁷)R⁸

where Z is an oxygen or a sulfur atom;

R⁶ is phenyl, substituted phenyl, phenylalkyl, substituted phenylalkyl, heteroaryl, or (heteroaryl)alkyl; and

R⁷ and R⁸ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl, (substituted phenyl) alkyl, and (cycloalkyl) alkyl; and

X and Y are independently selected from the group

consisting of a hydrogen atom, halo, trihalomethyl,

amino, protected amino, an amino salt, mono-substituted

amino, di-substituted amino, carboxy, protected

carboxy, a carboxylate salt, hydroxy, protected

hydroxy, a salt of a hydroxy group, lower alkoxy, lower

alkylthio, alkyl, substituted alkyl, cycloalkyl,

substituted cycloalkyl, (cycloalkyl)alkyl, substituted

(cycloalkyl)alkyl, phenyl, substituted phenyl,

phenylalkyl, and (substituted phenyl)alkyl;

or a pharmaceutically acceptable salt thereof.

245. (New) The method of claim 238, wherein the reagent is a compound of formula 3:

$$\begin{array}{c|c} A & N \\ N \\ N \\ O \\ O \\ O \\ C \\ C \\ C \\ C \\ C \\ R^1 \end{array}$$

FORMULA 3

wherein:

5

n is 1 or 2;

m is 1 or 2;

A is R^2CO -, R^3 -CO-, or R^4SO_2 -;

a group of the formula:

$$R^{5}CONH$$
 R^{8}
 $R^{6}OCONH$
 R^{8}
 $R^{7}SO_{2}NH$
 R^{8}
 R^{8}
 R^{8}

further wherein:

R¹ is a hydrogen atom, alkyl or phenylalkyl;

5

R² is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R³ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl;

R⁴ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁵ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁶ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl;

R⁷ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁸ is an amino acid side chain chosen from the group consisting of natural and unnatural amino acids;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, (heteroaryl)alkyl, or halomethyl;

a group of the formula:

--CH₂XR⁹;

wherein R⁹ is phenyl, substituted phenyl, phenylalkyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; and X is an oxygen or a sulfur atom;

a group of the formula: -CH₂-O-CO-(HETEROARYL); a group of the formula: -CH₂-O-PO(R¹⁰)R¹¹

5

10

15

wherein R¹⁰ and R¹¹ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl and (substituted phenyl) alkyl; and the pharmaceutically-acceptable salts thereof.

- 246. (New) A method for preventing or ameliorating inflammation due to an infectious disease comprising contacting a population of cells exposed to an infectious agent with an inhibiting effective amount of a reagent that suppresses the protease activity of at least one member of the interleukin-1 beta-converting enzyme (ICE)/CED-3 family.
- 247. (New) The method of claim 246, wherein said contacting is in vitro.
 - 248. (New) The method of claim 246, wherein said contacting is in vivo.
- 249. (New) The method of claim 246, wherein the reagent suppresses the protease activity in an irreversible manner.

250. (New) The method of claim 246, wherein the reagent suppresses the protease activity in a reversible manner.

251. (New) The method of claim 246, wherein the reagent is a compound of formula 1:

$$R^2$$
 CO_2R^3
 R^1
 R^2
 CO_2R^3

FORMULA 1

wherein:

n is 1 or 2;

- 10 R^1 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_mCO_2R^4$, wherein m=1-4, and R^4 is as defined below;
- 15 R^2 is a hydrogen atom, chloro, alkyl, cycloalkyl, (cycloalkyl) alkyl, phenyl, (substituted) phenyl, phenylalkyl, (substituted) phenylalkyl, heteroaryl, (heteroaryl) alkyl or $(CH_2)_pCO_2R^5$, wherein p=0-4, and R^5 is as defined below;

R³ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

R⁴ is a hydrogen atom, alkyl, cycloalkyl,
5 (cycloalkyl)alkyl, phenylalkyl, or
 (substituted)phenylalkyl;

R⁵ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

10 A is a natural and unnatural amino acid;

15

20

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl, halomethyl, CH₂ZR⁶, CH₂OCO(aryl), CH₂OCO(heteroaryl); or CH₂OPO(R⁷)R⁸

where Z is an oxygen or a sulfur atom;

R⁶ is phenyl, substituted phenyl, phenylalkyl, substituted phenylalkyl, heteroaryl, or (heteroaryl) alkyl; and

R⁷ and R⁸ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl, (substituted phenyl) alkyl, and (cycloalkyl) alkyl; and

X and Y are independently selected from the group consisting of a hydrogen atom, halo, trihalomethyl, amino, protected amino, an amino salt, mono-substituted amino, di-substituted amino, carboxy, protected carboxy, a carboxylate salt, hydroxy, protected hydroxy, a salt of a hydroxy group, lower alkoxy, lower alkylthio, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, (cycloalkyl)alkyl, substituted (cycloalkyl)alkyl, phenyl, substituted phenyl, phenylalkyl, and (substituted phenyl)alkyl;

or a pharmaceutically acceptable salt thereof.

252. (New) The method of claim 246, wherein the reagent is a compound of formula 3:

$$A = N \\ N \\ N \\ O \\ O \\ CH_2)_n$$

$$CH_2)_n$$

$$CH_2)_m$$

$$CO_2R^1$$

FORMULA 3

wherein:

5

10

n is 1 or 2;

m is 1 or 2;

A is R^2CO_{-} , $R^3_{-}O_{-}CO_{-}$, or $R^4SO_{2}_{-}$;

a group of the formula:

$$R^5CONH$$
 ; R^6OCONH R^8 or R^7SO_2NH ; furth

er

5

10

15

wherein:

R1 is a hydrogen atom, alkyl or phenylalkyl;

R² is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R³ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl;

R4 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

Application No. 10/058,522 Supp. Amdt. dated March 11, 2004 R⁵ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; R⁶ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, 5 or (substituted phenyl)alkyl; R7 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; R8 is an amino acid side chain chosen from the group consisting of natural and unnatural amino acids; 10 B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, (heteroaryl)alkyl, or halomethyl; a group of the formula: 15 --CH₂XR⁹;wherein R9 is phenyl, substituted phenyl, phenylalkyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; and X is an oxygen or a sulfur atom; 20 a group of the formula: $-CH_2-O-CO-(ARYL);$ a group of the formula: -CH₂-O-CO-(HETEROARYL); a group of the formula: -CH2-O-PO (R10) R11 25

5

10

25

wherein R^{10} and R^{11} are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl and (substituted phenyl) alkyd; and the pharmaceutically-acceptable salts thereof.

- 253. (New) A method for preventing or treating inflammation-associated disorders, comprising contacting a cell population with an inhibiting effective amount of a reagent that suppresses the protease activity of at least one member of the interleukin-1beta-converting enzyme (ICE)/CED-3 family, thereby preventing or treating said inflammation-associated disorder.
- 254. (New) The method of claim 253, wherein said inflammation-associated disorder is due to an inflammatory disease.
 - 255. (New) The method of claim 253, wherein said inflammation-associated disorder is asthma.
- 256. (New) The method of claim 253, wherein said inflammation-associated disorder is selected from the group consisting of pain, fever, asthma, bronchitis, vascular disease, nephrotic syndrome, and myocardial ischemia.
 - 257. (New) The method of claim 253, wherein said inflammation-associated disorder is bronchitis.

258. (New) The method of claim 253, wherein said inflammation-associated disorder is a vascular disease.

259. (New) The method of claim 256, wherein said pain is headache pain or joint pain.

260. (New) The method of claim 253, wherein the reagent suppresses the protease activity in an irreversible manner.

261. (New) The method of claim 253, wherein the reagent suppresses the protease activity in a reversible manner.

262. (New) The method of claim 253, wherein the reagent is a compound of formula 1:

FORMULA 1

wherein:

5

n is 1 or 2;

R¹ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl,
(substituted)phenyl, phenylalkyl,
(substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl

or $(CH_2)_mCO_2R^4$, wherein m=1-4, and R^4 is as defined below;

R² is a hydrogen atom, chloro, alkyl, cycloalkyl, (cycloalkyl) alkyl,

phenyl, (substituted) phenyl, phenylalkyl, (substituted) phenylalkyl, heteroaryl, (heteroaryl) alkyl or $(CH_2)_pCO_2R^5$, wherein p=0-4, and R^5 as defined below;

R³ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

R⁴ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenyl alkyl;

R⁵ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

A is a natural and unnatural amino acid;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl, halomethyl, CH₂ZR⁶, CH₂OCO(aryl), CH₂OCO(heteroaryl); or CH₂OPO(R⁷)R⁸ where Z is an oxygen

or a sulfur atom;

10

20

5

R⁶ is phenyl, substituted phenyl, phenylalkyl, substituted phenylalkyl, heteroaryl, or (heteroaryl)alkyl; and

R⁷ and R⁸ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl, (substituted phenyl) alkyl, and (cycloalkyl) alkyl; and

X and Y are independently selected from the group consisting of a hydrogen atom, halo, trihalomethyl,

amino, protected amino, an amino salt, mono-substituted amino, di-substituted amino, carboxy, protected carboxy, a carboxylate salt, hydroxy, protected hydroxy, a salt of a hydroxy group, lower alkoxy, lower alkylthio, alkyl, substituted alkyl, cycloalkyl, substituted (cycloalkyl) alkyl, (cycloalkyl) alkyl, substituted (cycloalkyl) alkyl, phenyl, substituted phenyl, phenylalkyl, and (substituted phenyl) alkyl;

or a pharmaceutically acceptable salt thereof.

263. (New) The method of claim 253 wherein the reagent is a compound of formula 3:

$$A \longrightarrow N \\ H \longrightarrow O \\ O \longrightarrow NH \\ (CH_2)m \\ O \longrightarrow CO_2R^1$$

FORMULA 3

wherein:

n is 1 or 2; $\label{eq:mais1} m \text{ is 1 or 2;}$ $A \text{ is } R^2CO^-, \ R^3^-O^-CO^-, \text{ or } R^4SO_2^-;$

a group of the formula:

$$R^5CONH$$
 R^8
; R^6OCONH
 R^8
or

further wherein:

R¹ is a hydrogen atom, alkyl or phenylalkyl;

R² is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R³ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl;

R⁴ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁵ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁶ is alkyl, cycloalkyl, (cycloalkyl) alkyl, phenylalkyl, or (substituted phenyl) alkyl;

15 R⁷ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

 ${\sf R}^{8}$ is an amino acid side chain chosen from the group consisting of natural and unnatural amino acids;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, (heteroaryl)alkyl, or halomethyl;

a group of the formula:

Application No. 10/058,522 Supp. Amdt. dated March 11, 2004 --CH₂XR⁹;

wherein R⁹ is phenyl, substituted phenyl, phenylalkyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl; and X is an oxygen or a sulfur atom;

5 a group of the formula:

-CH₂-O-CO-(ARYL); a group of the formula: -CH₂-O-CO-(HETEROARYL); a group of the formula: -CH₂-O-PO(\mathbb{R}^{10}) \mathbb{R}^{11}

15

wherein R^{10} and R^{11} are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl and (substituted phenyl) alkyl; and the pharmaceutically-acceptable salts thereof.

264. (New) The method of claim 253, wherein the cell population is also contacted with a second active agent.

the active agent is selected from the group consisting of: anti-inflammatory agents, matrix metalloprotease inhibitors, lipoxygenase inhibitors, antagonists of cytokines other than interleukin-lbeta, agents that modify differentiation, agents that modify proliferation, agents that modify pigmentation, antibacterial agents, antiparasitic agents, antifungal agents, anaesthetics, antipruriginous agnets, antiviral

agents, keratolytic agents, anti-free-radical agents, anti-seborrhoeic agents, anti-dandruff agents, and anti-acne agents.

266. (New) A composition comprising a reagent that suppresses the protease activity of at least one member of the interleukin-1beta-converting enzyme (ICE)/CED-3 family and an orally, nasally or intravenously acceptable carrier, adapted for preventing or treating inflammation-associated disorders.

267. (New) The composition of claim 266, wherein the reagent suppresses the protease activity in an irreversible manner.

268. (New) The composition of claim 266, wherein the reagent suppresses the protease activity in a reversible manner.

269. (New) The composition of claim 266, wherein the reagent is a compound of formula 1:

$$R^2$$
 CO_2R^3
 R^1
 R^2
 R^2
 CO_2R^3

FORMULA 1

wherein:
n is 1 or 2;

15

5

10

20

25

 R^1 is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_mCO_2R^4$, wherein m=1-4, and R^4 is as defined below:

 R^2 is a hydrogen atom, chloro, alkyl, cycloalkyl,(cycloalkyl)alkyl, phenyl,(substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl or $(CH_2)_pCO_2R^5$, wherein p=0-4, and R^5 is as defined below;

R³ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

15 R⁴ is a hydrogen atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted)phenylalkyl;

R⁵ is a hydrogen atom, alkyl, cycloalkyl,
(cycloalkyl)alkyl, phenylalkyl, or
(substituted)phenylalkyl;

A is a natural and unnatural amino acid;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, (substituted)phenyl, phenylalkyl, (substituted)phenylalkyl, heteroaryl, (heteroaryl)alkyl, halomethyl, CH₂ZR⁶, CH₂OCO(aryl), CH₂OCO(heteroaryl); or CH₂OPO(R⁷)R⁸

where Z is an oxygen or a sulfur atom;

R⁶ is phenyl, substituted phenyl, phenylalkyl, substituted phenylalkyl, heteroaryl, or (heteroaryl)alkyl; and

R⁷ and R⁸ are independently selected from a group consisting of alkyl, cycloalkyl, phenyl, substituted phenyl, phenylalkyl, (substituted phenyl) alkyl, and (cycloalkyl) alkyl; and

X and Y are independently selected from the group
consisting of a hydrogen atom, halo, trihalomethyl,
amino, protected amino, an amino salt, mono-substituted
amino, di-substituted amino, carboxy, protected
carboxy, a carboxylate salt, hydroxy, protected
hydroxy, a salt of a hydroxy group, lower alkoxy, lower
alkylthio, alkyl, substituted alkyl, cycloalkyl,
substituted cycloalkyl, (cycloalkyl)alkyl, substituted
(cycloalkyl)alkyl, phenyl, substituted phenyl,
phenylalkyl, and (substituted phenyl)alkyl;

or a pharmaceutically acceptable salt thereof.

270. (New) The composition of claim 266, wherein the reagent is a compound of formula 3:

$$A \longrightarrow N \\ N \\ N \\ O \longrightarrow N \\ NH \\ CO_2R^1$$

FORMULA 3

wherein:

n is 1 or 2;

m is 1 or 2;

5 A is R^2CO- , $R^3-O-CO-$, or R^4SO_2- ;

a group of the formula:

$$R^5CONH$$
 R^8
 R^6OCONH
 R^8
 R^8
 R^8
 R^8

Page 198 of 201

further wherein:

5

R¹ is a hydrogen atom, alkyl or phenylalkyl;

R² is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R³ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl, or (substituted phenyl)alkyl;

R⁴ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁵ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁶ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenylalkyl,
or (substituted phenyl)alkyl;

R⁷ is alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, or (heteroaryl)alkyl;

R⁸ is an amino acid side chain chosen from the group consisting of natural and unnatural amino acids;

B is a hydrogen atom, a deuterium atom, alkyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, phenylalkyl, substituted phenyl, (substituted phenyl)alkyl, heteroaryl, (heteroaryl)alkyl, or halomethyl;

```
Application No. 10/058,522
       Supp. Amdt. dated March 11, 2004
       a group of the formula:
       --CH<sub>2</sub>XR<sup>9</sup>;
       wherein R9 is phenyl, substituted phenyl, phenylalkyl,
       (substituted phenyl)alkyl, heteroaryl, or
5
       (heteroaryl)alkyl; and X is an oxygen or a sulfur atom;
       a group of the formula:
       -CH_2-O-CO-(ARYL);
       a group of the formula:
       -CH<sub>2</sub>-O-CO-(HETEROARYL);
10
       a group of the formula:
       -CH<sub>2</sub>-O-PO (R<sup>10</sup>) R<sup>11</sup>
       wherein R^{10} and R^{11} are independently selected from a
       group consisting of alkyl, cycloalkyl, phenyl,
       substituted phenyl, phenylalkyl and (substituted
       phenyl) alkyl; and the pharmaceutically-acceptable
15
       salts thereof.
```